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Original Articles.

SUBPHRENIC ABSCESS.*

BY HOWARD M. CLUTE, M.D., F.A.C.S., BOSTON,

Assistant Out-Patient Surgeon, Boston City Hospital.

A CONDITION which is the complication of a preceding disease possesses an unusual interest. A complication that may follow any abdominal surgical lesion, whether common or rare, demands attention; a complication that is seen but seldom must be recalled to memory lest it be overlooked on the rare occasions of its presence; a complication that when diagnosed offers large opportunity for cure is worthy of careful study. These three aspects appear in the condition known as subphrenic abscess.

Subphrenic abscess is rarely, if ever, a primary disease, but is secondary to an infective process elsewhere in the body. This infection is commonly in the abdomen, rarely in the thorax. Surgical literature of today reveals this complication much less frequently than the literature of fifteen years ago, no doubt because the modern surgical principles of drainage account in part for this improvement. The condition is found most frequently after the perforation of an ulcer of the stomach or duodenum. Appendicitis is second in the list of frequent causes. Other and less common factors preceding subphrenic abscess are: disease of the gall-bladder and biliary tract; disease of the pancreas, the spleen, and the liver; empyema; wounds of the abdomen and chest; soiling of the abdominal cavity at operation; and septicaemia with localization of infection between the diaphragm and the liver.

The situation of the abscess on the under surface of the diaphragm depends upon (1) the preceding inflammatory process, and (2) the anatomical relations of the liver and the diaphragm. Save for the "uncovered area," posteriorly, the surface of the liver is entirely covered with peritoneum. From the margins of this uncovered area on the right lobe are reflections of peritoneum running to the diaphragm, called the coronary ligament. The right extremity of this coronary ligament has been called the right lateral ligament. The left lateral ligament is a fold of peritoneum running from the upper posterior surface of the left lobe to the diaphragm. The coronary ligament and the left lateral ligament divide the diaphragmatic surface roughly into an anterior and a posterior half. This division is completed by the other peritoneal reflections in this area which form the gastro-splenic omentum and the phrenocolic ligament. A little to the right of the midline of the anterior abdominal wall, the falciform ligament arises. This fold of peritoneum is attached to the diaphragm and passes to the anterior and superior faces of the liver. On the upper aspect of the liver surfaces the two layers of the falciform ligament separate. The right layer passes into the coronary ligament and the

*An illustration of this insidious type was the case of a soldier who sustained a perforating bullet wound of the abdomen. He had no difficulty until two weeks later when he developed fever of increasing severity. He was operated upon by the technique here described and discharged cured.

left layer into the lateral ligament. The falciform ligament thus divides the anterior and superior peritoneal faces of the liver into right and left halves.

This arrangement of peritoneal reflections produces four fairly distinct potential spaces between the liver and the diaphragm which are

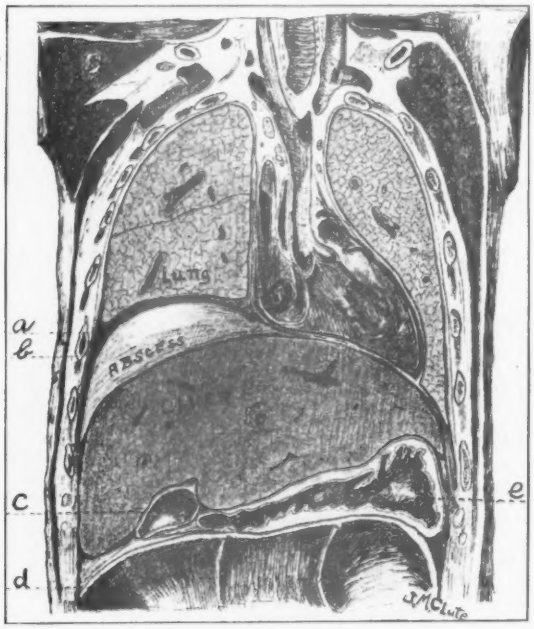

FIG. 1. Drawing showing anatomical relations of abscess in right anterior subphrenic space. (*a*) represents a small collection of serous exudate in pleural cavity; (*b*) the diaphragm. Note elevation of diaphragm on right with resulting compression of lung.
(Sketch adapted from "Toldt's Atlas of Anatomy.")

lined by peritoneum. There is only one space, called the "uncovered area" of the liver, in which the liver and the diaphragm are in contact without the interposition of peritoneal surfaces.

The boundaries of these four intraperitoneal spaces are as follows:

The right anterior space has the right lateral and coronary ligaments behind; the upper surface of the liver below; the falciform ligament to the left and the diaphragm above.

The left anterior space has the left lateral ligament behind, the diaphragm above. To the right is the falciform ligament, the stomach and the gastro-hepatic ligament. To the left is the abdominal wall and the spleen.

The right posterior space is sometimes termed the right subhepatic space or right kidney pouch. It is bounded above by the liver, the gall-bladder and the right lateral and coronary ligaments. Posteriorly is the diaphragm. To the left is the margin of the gastro-hepatic omentum and the foramen of Winslow.

The left intraperitoneal space is the lesser peritoneal cavity.

Drainage into one of these spaces is favored by gravity when the patient is lying supine in bed. The products from a perforated gastric ulcer tend naturally to collect in the right anterior space. A high lying appendix abscess tends naturally to drain into the right posterior space by way of the lateral colic groove. An ulcer of the posterior surface of the stomach may perforate into the left posterior space. The lymphatics behind the cecum and ascending colon pass upward into the subphrenic area. Infection may readily follow this route.

Barnard pointed out years ago that there was a communication between the lymphatics in the region of the deep epigastric artery with the falciform ligament which leads to the subphrenic region. There may, of course, be abscess formation from the presence of an infection in the blood stream. A pylephlebitis may occur and present as one of its features an abscess about the portal vein just below the diaphragm.

The onset of symptoms of subphrenic abscess may be insidious or stormy. In the cases we have seen, the first sign of approaching trouble has been a steadily rising daily fever with no local evidence of the cause. The patient is convalescing fairly well from a surgical lesion of the abdomen when his chart assumes the so-called "picket fence" appearance. Chills and sweats may accompany the daily rise in temperature. He now loses ground rapidly. His appetite becomes capricious or is absent. His face is drawn and haggard. He loses weight very rapidly. He complains of a sense of discomfort or fullness in the epigastric region. It may be impossible for him to draw a deep breath. Cough and hiccough are present in a great many cases. Pain with deep breathing is a frequent accompaniment of the early stages of the disease from the presence of a diaphragmatic pleurisy. There is frequently considerable gastric distress with belching of gas and sour eructations. Constipation is sometimes marked; diarrhoea is rare. In general, the patient looks and feels very sick, but has little or nothing on which to base his complaints.

Occasionally the onset is much more acute. This is especially prone to happen with a perforation of the stomach or duodenum, which suddenly floods the subphrenic area with irritating products. Here the initial shock and collapse is due to the perforation. The outcome may be a diffuse peritonitis or a localized subphrenic collection of pus with symptoms such as we have set forth.

The physical signs in such a case will vary, first with the situation of the abscess, and second with the type of abscess. There are two types of abscesses. One, containing fluid (pus) alone; the other, containing pus and gas. The gas may come from the lumen of a viscus or from the fermentative activity of anaerobic bacteria present in the pus. We have seen two cases with pus alone and one case with pus and gas. In general, inspection reveals marked limitation of motion of the affected side of the chest. There may be visible widening or bulging of the right lower thorax. Edema over the side or back of the chest may occur. Percussion will reveal flatness over

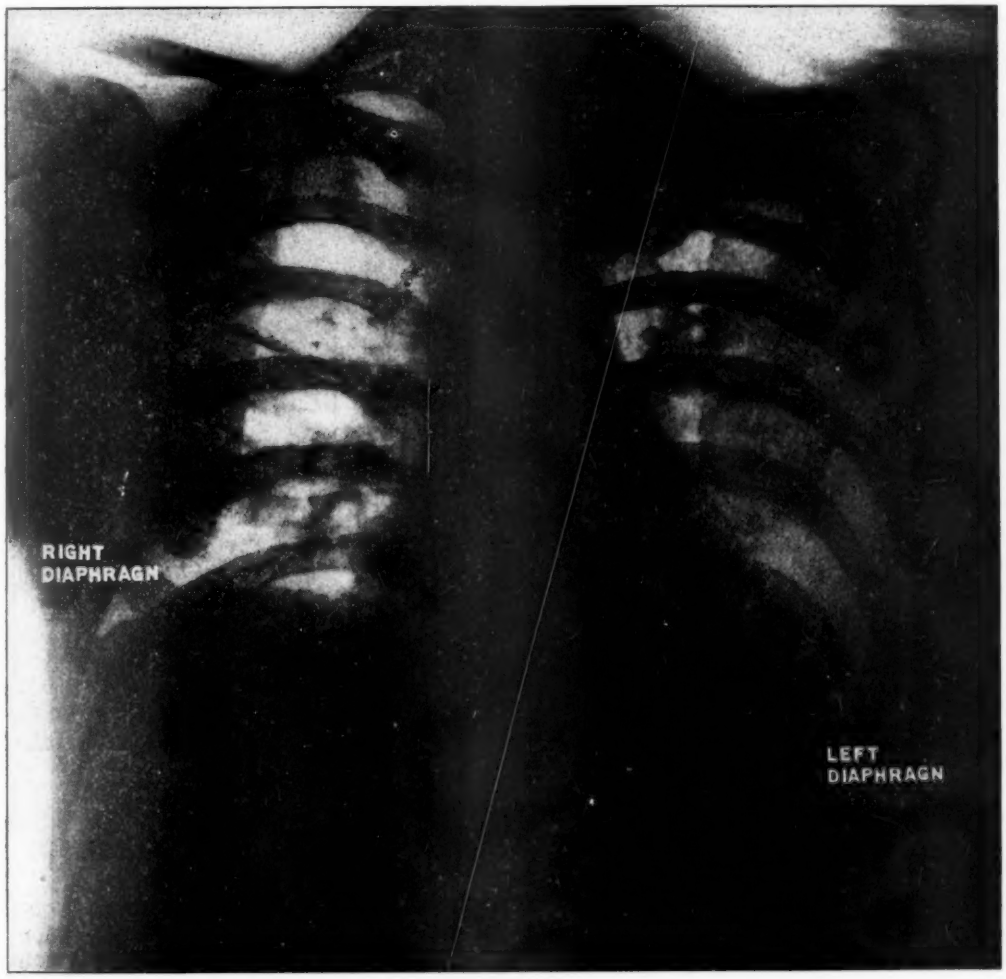

Fig. 2. X-ray in supine position of Case 3. Note diaphragm high and smoothly rounded on right. Gas bubble not visible in this position. (X-ray with portable machine by Dr. Frank Wheatley.)

the lower chest in front and in back if the abscess contains pus alone. The presence of gas in the abscess cavity will give a tympanitic note to percussion with obliteration of the lower liver dulness. The dulness may extend anteriorly as high as the second rib and posteriorly to the middle of the scapula. Often the line of percussion dulness will descend with deep inspiration quite perceptibly.

Auscultation will reveal absent breath sounds and absent vocal fremitus up to the limit of dulness. Above this level, however, both vocal and tactile fremitus may be slightly increased for a limited distance due to the margin of compressed lung next to the high diaphragm. Occasionally a pleuritic friction rub may be heard over the collection of fluid, but this is not found constantly. When there is gas in the abscess cavity, a succussion splash may be obtained by shaking the patient.

The occasional presence of a varying amount of fluid in the pleural cavity renders the diagnosis more difficult. Simple or purulent pleurisy is frequently diagnosed in these cases. An exploratory needle puncture may be a valuable aid to diagnosis. It should, however, be done with great care. We may obtain clear straw-colored sterile fluid from the pleural cavity and then when the needle perforates the diaphragm and enters the abscess we find gas and pus entering our syringe. Sterile fluid followed by pus at the same tap is almost pathognomonic of subphrenic abscess.

Palpation may reveal the liver border well below the costal margin. Compression of the chest wall low down or strong "fist percussion" may cause pain. A well marked leucocytosis is generally present though in certain chronic cases there may be a leucopenia.

Very often the diagnosis of subphrenic abscess can be finally made only by x-ray, which offers us the most positive findings in the majority of cases. By the symptoms and physical signs alone, it may well be impossible to determine whether we are dealing with a subphrenic abscess, a pyothorax, or a pyopneumothorax. X-ray plates and fluoroscopic examinations will generally settle the question definitely.

Normally the right diaphragm is one-fourth to one-half inch higher than the left. Each side

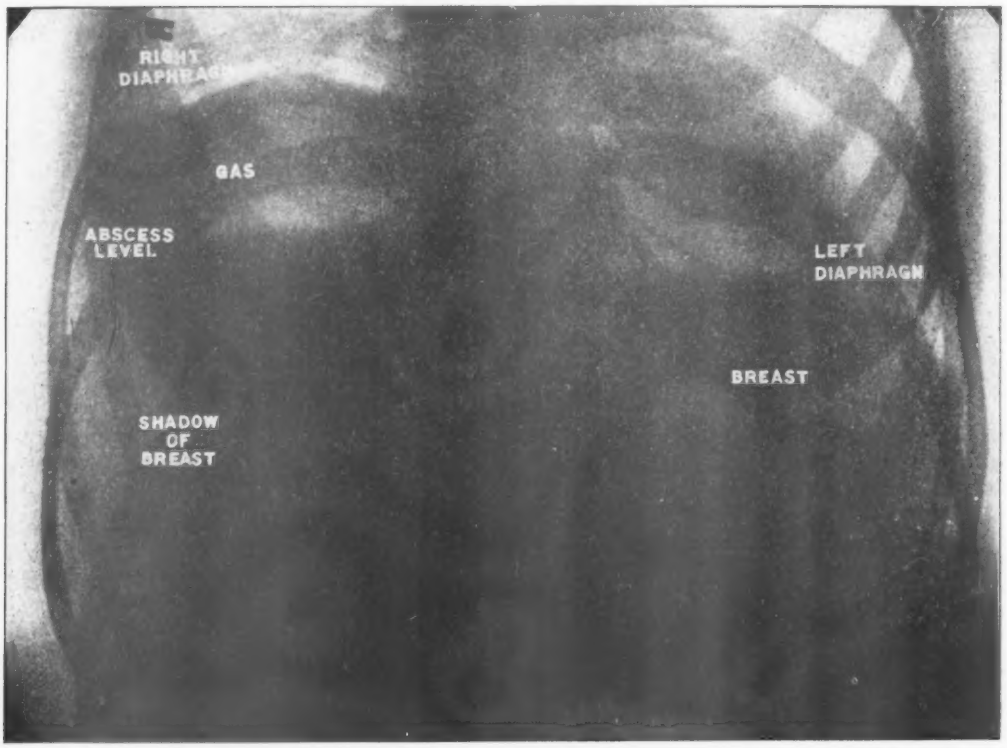

FIG. 3. X-ray of CASE 3, in sitting position. Note persistent high diaphragm on right; straight line level of the pus in the abscess with gas above it. (X-ray with portable machine by Dr. Frank Wheatley.)

moves straight up and down with respiration and there is no flattening of the curve. The normal range of this motion is one-half to three-fourths inch, with quiet breathing, but with forced respiration the range increases to two and one-half or three inches.

Any inequality or fixation of these movements is pathological. In subphrenic abscess we find the diaphragm on the affected side raised and fixed. It does not move with respiration to any degree, while the unaffected side maintains its normal range of motion. The lung above the fixed diaphragm is compressed. The level of the diaphragm may be only slightly raised, or it may reach up to the third rib. The costo-phrenic angle is not obliterated as it is with thoracic collections of fluid.

The line of the diaphragm is a smooth and regular curve, involving the entire course of the affected side. In liver tumors, liver abscesses and adhesions from old pleurisy, this curve is more irregular and localized more sharply to a single area of the diaphragm. A high, fixed diaphragm with a persisting costo-phrenic angle is very typical of subphrenic abscess.

The course of the disease is marked by steady decline. Weight loss is generally very pronounced, as are the weakness and general debility. Without operation, the mortality varies from 82% (Eisendrath, quoted by Lockwood) to 100%. Death results from the effects of the long-continued toxemia or from rupture of the abscess into some neighboring viscus. With operation, the mortality is about 25% of the total cases.

The treatment of subphrenic abscess is incision and drainage. The anatomical location of the abscess, however, should be carefully considered, for this will determine the method of approach. Abscesses on the left side must always be first approached from the front. In the left anterior space, drainage must be instituted through the anterior abdominal wall. If the left posterior space is found to contain pus, the anterior incision should not be used; but a second incision should be made to approach the collection from behind. This may or may not be below the rib margin. Collections of pus on the right side are drained either (1) from below the rib margins; (2) by incision between the lower ribs; or (3) resection of one or more ribs.

The situation of these abscesses is such that to drain them adequately we must either go through the lower part of the pleural cavity, or we must retract the pleura and go around it. Great care must be taken, in either case, that the pleural cavity is not laid open to the possibility of infection from the abscess. An empyema superimposed on patients already so ill may readily prove fatal.

It is our belief that the drainage of these abscesses should be carried out in two stages. We have done the entire two-stage operation under local anesthesia once, and once with ether for the first stage and novocaine for the second. An incision is made along the center of the

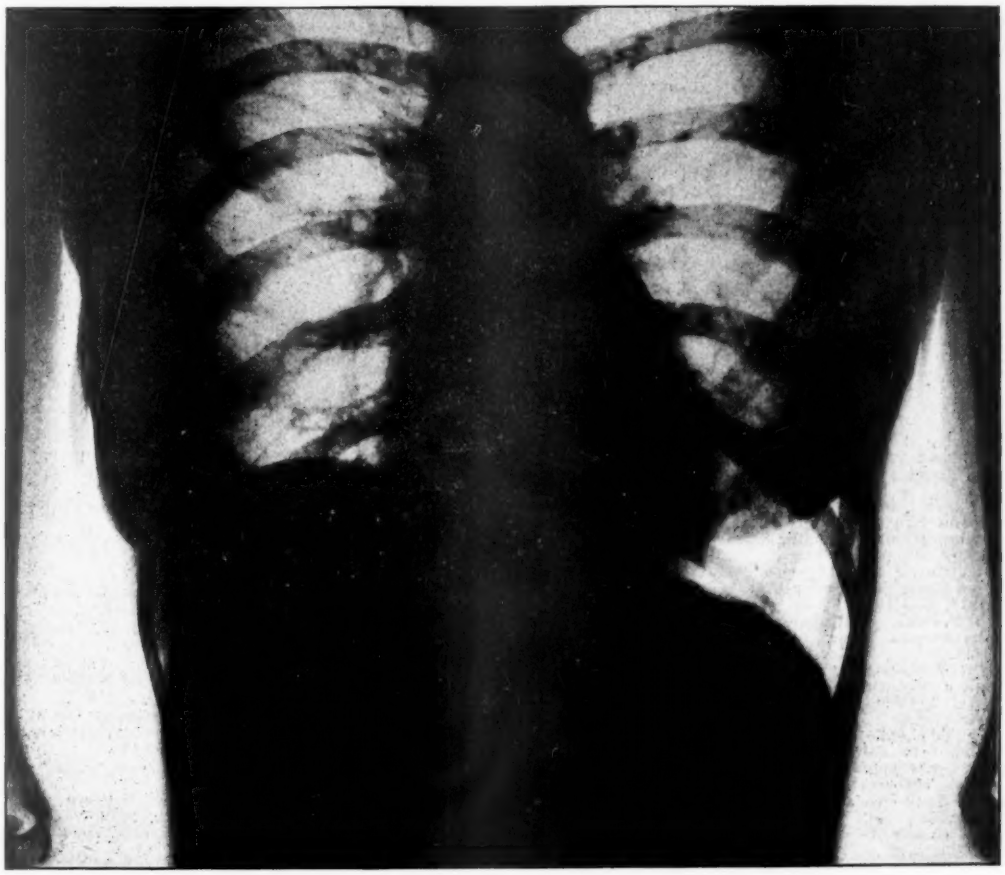

FIG. 4. X-ray in sitting position of CASE 3, 3½ months after operation. Wounds now entirely healed and patient feels perfectly well. Note that right diaphragm still remains high. By fluoroscope the excursion of right diaphragm is still very limited. (X-ray by Dr. Frank Wheatley).

tenth rib, in the mid-axillary line, for a distance of two and one-half to three inches. This portion of rib is now removed and the pleural cavity is opened by an incision parallel to the rib and in the center of its bed. It may be well to pass a suture about the intercostal vessels which are exposed. In one case we cut these and found no anesthesia necessary for the second stage of the operation. The pleural cavity may contain a little straw-colored fluid, which will flow out of the wound. The diaphragm, covered by its layer of pleura, presents in the wound a close approximation to the cut parietal pleura. The borders of the incision in the parietal pleura are now sutured to the diaphragm with a continuous catgut suture. Sterile vaseline is put into the wound and a dry sterile dressing applied. This completes the first stage of the operation. The operator may, before leaving the wound, insert a needle through the diaphragm to locate the abscess, if he so desires. It is better, however, to leave the abscess entirely alone for forty-eight hours after the first stage and thus permit the pleural cavity to be fully walled off by adhesions. The second stage of the operation is relatively simple. Under local anesthesia, unless the intercostal nerve has been cut and the area rendered insensible, an incision is made in the diaphragm parallel to the incision in the parietal pleura. The edges are retracted and a finger inserted in the direction of the abscess will shortly disclose the presence of pus. A large rubber tube is inserted and held in place with a suture through the skin or fascia.

It is advisable to continue this tube drain for a week or more in large-sized abscesses, and to replace it gradually with rubber dam. Too hasty withdrawal of the tube may result in a secondary local collection of pus.

With this method of drainage, the temperature has rapidly come down to normal in our cases and has remained there. We have had no difficulty from bleeding from the intercostal vessels or from necrosis of the cut rib. We believe that the two-stage operation is safer than the one-stage procedure because it reduces to a minimum the chance of empyema.

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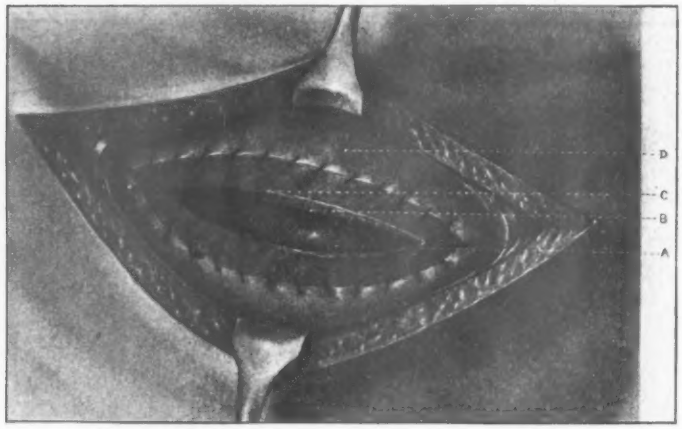

FIG. 5. Drawing showing relations at close of second stage of operation. At first stage of operation the rib is resected and the parietal pleura (*d*) is sutured to the visceral pleura (*c*). The second stage of the operation consists of incising diaphragm (*b*) and draining pus above liver (*a*). Compare this drawing with Fig. 1, to demonstrate the relations of pleura to abscess.

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CLINICAL NOTES ON THE DIAGNOSIS AND TREATMENT OF GALL-BLADDER DISEASE.*

BY FRANK H. LAHEY, M.D., BOSTON.

THE types of pain which can occur in gall-bladder disease are numerous, varying from the typical severe colic, which is referred in a characteristic way, to a very moderate localized and constant pain. Between these two types there are all degrees of variation.

With a fairly normal gall-bladder containing numerous very small stones, the degree of pain is often almost in proportion to the size of the stones, the very small stones of the size of bird-shot passing through the ducts with pain of only the slightest intensity and of short duration, while stones which are too large to pass the cystic duct may be of proper size to become wedged in the pelvis of the gall-bladder and produce pain of the typical colicky character. It is our opinion that the typical colicky pain is more prone to occur in a patient whose gall-bladder walls are but little involved pathologically.

It is in the old gall-bladders whose walls are thickened from long-standing cholecystitis that the pain of constant type is prone to occur. In this type of gall-bladder disease, there is frequently obstruction in the cystic duct as the result of either stone or exudate and the gall-bladder, distended and thick-walled, contains at times purulent material and at other times merely thick, viscid mucus unstained or only faintly stained with bile, in either case with or without the presence of stones. It is in this type that the pain is apt to be of the constant and persistent variety.

The severity of the pain and, at times, the suddenness of relief have been significant points in the history associated with this disease, sudden relief of colicky pain indicating the slipping back of the stone from the pelvis of the gall-bladder.

Upon the history of soreness over the gall-bladder region after the pain has ceased we have also come to depend as being quite indicative of the presence of this disease.

The location of the pain and tenderness has been atypical in many cases,—sometimes in the right lower quadrant with a prolapsed liver, at times to the left of the midline, although in these cases the gall-bladder was demonstrated to be in its normal location. There have been several cases also in which the pain and tenderness have been located so far out to the right as to be almost in the loin. Unlike the above cases, these gall-bladders have been demonstrated at operation to be located far out to the right where the pain and tenderness existed.

As to the reference of pain, there has been but little consistency. In many cases the pain has not been referred at all; in others it has been referred to the left shoulder; in many, straight through to the back, and in the remainder, typically to the right shoulder.

In cases operated early, before the attacks have become frequent, the past history usually contains the story of the occurrence of acute indigestion. It is surprising how often this diagnosis is still made.

The occurrence of jaundice is found in the past histories of those cases where the common duct is involved in only a small percentage of all cases. In our opinion it is desirable that cases should be operated upon, if possible, before jaundice occurs, inasmuch as its presence indicates in every instance one of two very undesirable features: stone in the common duct or infection spreading to the common duct.

Tenderness has been found to vary according to the relation of time of examination to time of attack. Several cases, however, have failed to show tenderness, even immediately after an attack, probably because of the fact that the attacks were largely due to mechanical obstruction without attendant infection.

The diagnostic value of tenderness, unless well marked and definitely demonstrable, is materially modified by the fact that some gall-bladders are located high under a shelving edge of the liver, making palpation difficult and uncertain, as well as by the fact that deep palpation elicits tenderness in many patients in whom no lesion can be demonstrated.

In inflammatory lesions of the gall-bladder, spasm is remarkably often absent—even in those lesions which verge upon gangrene. Likewise marked reactions of temperature are strikingly rare in a definite number of cases, this factor being dependent, of course, upon the degree of cholecystitis present.

X-ray in our opinion is of value only as positive evidence. We are unable to state in what percentage of cases the shadow of the stones has been demonstrated, but we have had a sufficient number of undemonstrated cases to make us willing to operate on those cases with definite histories but negative x-ray findings.

We have published our views as to the value of inferential x-ray evidence in gall-bladder

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disease such as demonstrable gall-bladder, flattening of the duodenum and fixation of the duodenum to the right. We believe that operation should be urged with such evidence, not upon the basis of the x-ray findings but upon the clinical history and findings, and that x-ray findings of the above sort are of value only as corroborative evidence and should never in themselves be considered decisive factors in favor of operation.

We therefore feel that the only x-ray evidence which in itself is diagnostically dependable is the definitely demonstrable shadow of the stone upon the plate, and by this we mean that the shadow or shadows must be of sufficient clearness that we ourselves can see them.

Regarding the method of diagnosis by means of the duodenal tube, based upon the findings of Meltzer that the introduction of magnesium sulphate into the duodenum produces relaxation of the sphincter of Oddi, the sphincter at the junction of the common duct, and also contraction of the gall-bladder (law of contrary innervation), we have very marked reservations.

The method consists in the introduction of the duodenal tube, care being taken that teeth are brushed, the mouth cleansed, and the throat gargled with an antiseptic, and the instillation of 50 c.c. of 33 1-3 per cent. magnesium sulphate, collections of bile being made from time to time. A microscopic study of this material is made. The first bile, light yellow in color, is considered common duct bile; the second, darker and more viscid, gall-bladder bile; the third, thin and yellow, fresh liver bile.

As a method of diagnosis, certainly in severe cases, we feel that the possibility of error, both in obtaining bile and interpreting the evidence thus obtained, is so great as to render it of value only as confirmatory data. It is our feeling that we would not hesitate to proceed surgically in spite of negative evidence of this character, clinical signs being present; while we would hesitate to proceed surgically upon positive evidence of this type, clinical signs of convincing character being absent.

The medical treatment of gallstones today, except in those patients who are too old or too weak for surgery, has very few surviving adherents in this country. Its popularity is probably still retained to some degree in Europe, where the enthusiasm for Spa treatment is very much greater than in this country. All measures of this nature must of course be directed largely to increasing elimination and lessening the burden of digestion, and should not be aimed directly at the stones or the pathological process within the bile passages secondary to them. An exception to this, of course, is the so-called internal drainage spoken of above, under the head of diagnosis. We consider this method even less adequate as a therapeutic measure than as a diagnostic measure. We believe that the amount of drainage accomplished is uncertain, and that even though the ducts be drained, an infected gall-bladder may be and usually is present, entirely undrained and menacing the life of the patient by the possibility of rupture or sepsis.

If it be accepted, then, that operative measures are in general indicated in gall-bladder disease, several important queries at once arise. First, should we advise operation for quiescent gallstones discovered in the course of other x-ray examinations? To this query we reply affirmatively. We urge their removal even though no other operative measure is contemplated, first, because it has been impressed upon us in our experience that gallstones often remain quiescent throughout middle life only to produce symptoms at an age when the individual is a very poor operative risk; second, because we are convinced that gallstones which are sometimes considered quiescent are often responsible for mild but persistent digestive disturbances without definite attacks of gallstone colic. The fact that carcinoma of the gall-bladder occurs but rarely in gall-bladders not containing gallstones adds, we believe, a further argument to the logical indications for the removal of gallstones. Furthermore, we believe that operation should be urged in cases of quiescent gallstones, first, because mild or acute pancreatitis is at all times a distinct possibility in the presence of gallstones; secondly, because common duct stone with its decided increase in mortality rate over stones in the gall-bladder is always a possibility; and finally, because of the danger of cholangitis with its usually fatal outcome.

The second query which arises is, should we advise operation during the attack, or should operation be deferred until the attack has subsided? We believe that immediate operation should be urged, first, in those early cases (largely mechanical in nature) where there have been but few previous attacks, where a fairly normal gall-bladder is presumed to exist, and where there is no evidence of infection, such as temperature and white blood count reactions; and, secondly, in those cases in which an attack is complicated with acute cholecystitis, particularly with high fever.

In the first group we urge immediate operation because the problem is largely a mechanical one, uncomplicated by infection. In these cases relief from suffering can be given the patient at once, with no added danger, and the possibility of a stone making its way into the common duct and necessitating the further procedure of choledochectomy is diminished.

In the second group of cases we urge immediate operation because with cholecystitis it is impossible to prophesy whether the process will go on to resolution or progress to slough and gangrene of the gall-bladder or infection of the ducts.

In the less severe type (showing mild infection with moderate temperature reaction) of long standing and with repeated attacks, we feel that operation may with safety be deferred until cholecystectomy can be done upon a gall-bladder whose walls and particularly whose cystic duct and periductile tissue present less induration and oedematous tissue, thus permitting more accurate dissection with less danger of disseminating infection and later crippling adhesions.

Common and hepatic duct stones we feel should be operated at once, unless contraindication exists in the form of obstructive jaundice, in which emergency every effort should be directed toward reducing the coagulation time to its lowest possible point. Operation should be undertaken in these cases before the occurrence of duct infection and before the occurrence of cholangitis with its unfavorable post-operative prognosis.

We have seen the coagulation time in obstructive jaundice as high as thirty-six minutes. In obstructive jaundice we do not believe that it is justifiable to operate without attempting materially to lower the coagulation time. We have recently seen a fatal outcome due to post-operative hemorrhage in two cases of this character operated elsewhere than in our clinic, no attempt having been made preoperatively to reduce the coagulation time by suitable measures.

We consider a coagulation time of ten minutes or under within the limits of safety. Calcium has for many years been employed as a measure suitable for increasing the coagulability of the blood and probably in most instances has had little if any value in this respect except in the condition of obstructive jaundice, where it appears to have real value, producing a definite and demonstrable diminution in the coagulation time. We have used it in the form of calcium lactate by mouth and, where its continued use has produced gastric disturbance, by rectum. Given by mouth or by rectum, large doses are necessary to become effective,—twenty to thirty grains three times a day. It has been our experience that when the drop in coagulation time has been accomplished, it may be of but very short duration and operation should be undertaken at once.

We have recently had prepared for us by Hynson, Westcott and Company 5 c. c. tubes of sterile 10 per cent. calcium chloride solution which may be given intravenously, by means of which lowering of the coagulation time may be accomplished much more quickly and without the nausea which frequently attends the administration of large doses of calcium by mouth. It should be given once a day for three days, together with calcium lactate by mouth, if tolerated.

The operative technique of cholecystectomy needs no elucidation, in our opinion. We do, however, feel that the decision as to whether we should employ cholecystectomy or cholecystostomy in certain cases is a very important one, and we have formulated the rule that we do cholecystostomy in those cases of gall-bladder disease in which the gall-bladder is too good or too bad to take out, and in certain obese individuals in which the difficulties of the procedure of cholecystectomy make its risks outweigh the gain to be attained. The first class are those rare cases in which a single smooth stone exists in a gall-bladder quite normal to inspection and palpation, and even in such cases we frequently do cholecystectomy, except in the corpulent individuals above mentioned.

We hold particularly firm convictions concerning the indication for preliminary cholecystostomy in the latter group—that is, in the gangrenous gall-bladder too bad to take out—for the reason that cholecystectomy in a thick-walled and acutely infected gall-bladder (we do not refer to the thick-walled and distended gall-bladder without infection) presents not only technical difficulties of removal, but serious possibilities of immediate and remote post-operative complications. It is in this type of case that removal of the gall-bladder is often accomplished with difficulty, removal being many times possible only by dissection of the indurated bladder from the fundus toward the cystic duct and accompanied often by considerable bleeding and rupture of the gall-bladder with dissemination of infection. It is in this type of case that oozing surfaces are often left in the bed of the liver previously occupied by the gall-bladder, requiring the introduction of gauze packing to control them. These are conditions favoring distinctly the occurrence of an infected hematoma in the right upper quadrant as an immediate complication, and crippling peripyloric adhesions as a remote post-operative complication, both of which dangers may be obviated in this type of case by preliminary cholecystostomy.

We have therefore based our opinion as to the removability of the gall-bladder upon the probable degree of post-operative infection in the defect left by its removal and the probable amount of peripyloric adhesions.

Our decision as to whether the removal of the gall-bladder (that procedure having been decided upon) shall be accomplished from the cystic duct upwards or from the fundus downwards has always been based upon the adequacy of exposure of the cystic duct at its junction with the common duct. We decidedly prefer and advocate the former procedure, but from our experience have firmly fixed convictions that the primary dissection and ligature of the cystic duct should never be attempted except where very adequate exposure of that structure, of the common duct, and of the cystic artery is possible. In all cases where this is impossible, we feel sure that dissection from the fundus downward until the gall-bladder hangs by the cystic duct is infinitely safer, both as regards preservation of the intactness of the common

duct and control of the cystic artery. It is also our firm conviction that the cystic duct should never be cut and tied until it has been carefully wiped down to the common duct and the latter structure carefully identified as outside of the grasp of the right angle clamps.

Regarding exposure of the cystic duct and cystic artery, we wish to call attention to the frequent unusual location and relation of these structures. We have several times seen a cystic duct lying parallel with the common duct and emptying into that structure not at the usual location but well down and close to where the common duct enters the duodenum. In such a case we removed a stone from the parallel-lying cystic duct, thinking it to be the common duct, and were greatly distressed to be unable to pass a probe up into the hepatic duct until further dissection revealed the fact that the stone had been removed from an elongated cystic duct and that the common and hepatic ducts had not been opened at all.

We have seen the cystic artery come from behind the hepatic duct. We have seen it, of course, in its usual location close to the cystic duct and at times at a distance from the cystic duct where it is overlooked and easily injured. In this connection we know of no operative complication that is more trying than a torn cystic artery in a deep field, difficult of exposure and rapidly filling with blood each time after being wiped out.

As to common duct drainage, we have no rule except to explore all large common ducts and to pass a probe through any of which we have the slightest doubt. A very good procedure we have found is to pass a catheter through the common duct until it enters the duodenum. Salt solution is then injected through the catheter and if it passes the sphincter into the duodenum, demonstrating the absence of obstruction in the duct, water will not return around the catheter; if it does not pass into the duodenum, water will pass back around the catheter.

We do not approve of the closure of the abdomen without drainage. We admit having had cases in which the ligature has come off the cystic duct even after the most painstaking application. We admit having left a stone in the common duct after removal of the gall-bladder, and as long as such possibilities may arise (they do in every surgeon's experience), and we see no way to be certain that they may not arise again, we shall continue to institute drainage following cholecystectomy.

It has been our experience to have had late post-operative opening of upper abdominal wounds in a few cases in which the wound had undoubtedly been the site of a low grade infection of sufficient extent to interfere with healing. While practically all of the cases recover uninterruptedly with secondary suture, we feel that the possibility of the occurrence of this condition may be diminished by the introduction of a considerable number of through and through rubber-covered stay stitches, together with late removal of the stitches and wide supporting straps.

The foregoing conclusions were reached from an investigation of one hundred and twenty-six gallstone cases. This group of cases was selected from our private records rather than from our public hospital service because we anticipated more complete, adequate and numerous answers to our questionnaire.

Of the records of 126 gall-bladder cases studied:

64 of 85 cases submitted to cholecystectomy were traced.
Of this number 51, or 80%, reported themselves as cured.
6, or 9.3%, reported themselves improved.
3, or 4.5%, reported themselves as no better.
4, or 6.2%, died.
28 of 41 cases submitted to cholecystostomy were traced.
16, or 61%, reported themselves cured.
7, or 27%, reported themselves improved, but with symptoms.
2, or 7.7%, were operated again.
3, or 11.5%, died.
11 of 15 cases submitted to choledochostomy for common or hepatic duct stone were traced.
8, or 72%, were cured.
2, or 18%, were improved, but with symptoms.
1, or 9.9%, died.

CONCLUSIONS.

A careful history is usually the most dependable feature in the diagnosis of gallstones.

There are no harmless gallstones and they should be removed as soon as diagnosed.

Cholecystectomy is in a great majority of cases the operation of choice, but is not universally applicable.

Obstructive jaundice usually demands delay and the use of measures to lower coagulation time.

Every dilated common duct and every common duct suspected of harboring a stone should be thoroughly explored.

Every case of cholangitis should have the common duct drained.

All successful bile passage surgery is dependent upon a long incision and adequate exposure.

DR. W. W. KEEN'S ADDRESS ON THE OCCASION OF THE BESTOWAL OF THE BIGELOW MEDAL.

This valuable and interesting contribution to medical literature should be read by every physician and surgeon. A few copies are available and may be secured by applying to the BOSTON MEDICAL AND SURGICAL JOURNAL.

THE TUBERCULAR INFECTION IN CHILDHOOD.

Study I.

Comparative Activity of Tuberculin Preparations.

BY A. R. CUNNINGHAM, M.D., AND A. R. RACTLIFFE, BOSTON.

Work done at the Boston Dispensary children's clinic of Dr. Maynard Ladd under a grant from the Massachusetts Tuberculosis Association and initiated by Dr. Edw. O. Otis, President of the Association.

By combined methods, over 1200 children have been tested in the Boston Dispensary with tuberculins, both human and bovine, since July, 1921. Discrepancies soon appearing between the results obtained and those reported by other authors made it seem important to investigate the activity of tuberculin as prepared by different manufacturers. The tuberculins referred to in this comparative study are in each instance human O. T. This material is available from many laboratories—commercial, state, and those of some of the larger hospitals. The Massachusetts Health Department, however, does not furnish tuberculin. The Saranac Laboratory at Trudeau, N. Y., furnishes human tuberculin gratuitously, for experimental purposes, to hospitals and clinics only. The preparations generally used in testing individuals in hospital and private practice are probably those from commercial laboratories, and it seems, from personal communications, that investigative work is often carried on with preparations from state departments of health and sometimes with the Trudeau preparation. We were unable to obtain tuberculin from the New York State Laboratory and have tested no tuberculins from state health departments.

The federal public health service does not control the preparation of tuberculin designed for purely diagnostic purposes, or supply any standard with which such preparations might be compared. There is, in fact, no existing method of standardizing tuberculin which is in any way satisfactory, although various efforts have been made to evolve one. Guinea-pigs are too variable in susceptibility to tuberculin for the use of lethal units as a standard. The activity of any preparation can be ascertained only by trial upon a number of known positive persons and seems to depend chiefly upon the use of full-grown cultures of the bacilli. In a personal communication we have received the suggestion that the inferiority of some preparations may be due to the use of cultures which are not fully ripe and which are boiled too long. Preparations of tuberculin are expected to sustain ageing up to five years without considerable loss of potency and may be kept at room temperature for the entire period.

Reasons for suspecting the activity of some tuberculins may be found not only in our own experience but in examining a few recent reports from other investigators. Using the Pirquet method, Arnfinsen[1], in 6978 public school children in Norway, obtained positive reactions in 37.8%, a figure which would be modified downward, without much doubt, were children below school age included. Sill[2], in 658 New York children from infancy to 13 years of age, found only 9.2% giving positive reactions. In this group there were none whose family records showed tuberculosis. Sill concludes that the incidence of the tubercular infection varies not only in different countries but in the different cities of the United States. Pirquet himself[3] found 56% positive in Vienna children who were from 11 to 14 years of age. The results from different authors from the Pirquet method in children, seem to average in the vicinity of 38%, with a proportionate representation of all ages up to 14 years, but wide variations in the results obtained by different authors are, in our opinion, due largely to the use of tuberculins of inferior quality and to technique rather than to regional variations in the incidence of the infection.

In the children upon whom this study is based tuberculin was applied both by the Pirquet method and by the intracutaneous method of Mantoux, both methods being employed on each patient. For the intradermal tests a dilution of 1-250 or a dosage of approximately .1 mg. was chosen after much experimentation, as giving the highest percentage of positive reactions without any so severe as to cause ulceration. Successive tests with increasing doses would be more acceptable if the incidence of the infection was to be determined rather than the comparative activity of the tuberculins. A sample of tuberculin from a commercial laboratory was used until several hundred children of all ages had been tested. This preparation is the one later described as "No. 1." The average age of these children was 6.6 years and positive results were obtained in only 24%. The positive percentage in children of school age for comparison with the figures of Arnfinsen was 31%, and from 11 to 14 years of age 42% were positive as compared with Pirquet's 56%. These figures, representing the combined results of dermal and intradermal tests in our group, are compared with dermal results alone in the reports of the other investigators and do not seem to satisfy.

"No. 1" was thereupon discontinued and another commercial preparation was employed in testing a second group of children. This second tuberculin is designated "No. 2." The age average of this group was 6.8 years and the percentage of positive reactions rose to 36.2% but still seemed too low. From the ages 5 to 14 the

positive percentage was 45.5% and from 11 to 14 years it was 58.1%.

A third group was tested with tuberculin "No. 3." The average age was 7.5 years and the percentage of positive reactions was 47.1%. From 5 years to 14 years inclusive this percentage was 50.9% and from 11 to 14 years, 67.8%. This sample of tuberculin was that from the Saranac Laboratory.

TABLE 1.

method	av. age	% pos.	0-13 yrs.	5-14 yrs.	11-14 yrs.
Arnfinsen Pirquet	- -	- -	- -	37.8%	- -
Sill "	- -	- -	9 2%	- -	- -
Pirquet "	- -	- -	- -	- -	56.0%
"No. 1" combined	6.6 yrs.	24.0%	- -	31.0%	42.0%
"No. 2" "	6.8 "	36.2%	- -	45.5%	58.1%
"No. 3" "	7.5 "	47.1%	- -	50.9%	67.8%

Hamburger[3] and other authors believe that tuberculin reactivity is influenced by the season, the author quoted stating that in the fall, children with out-spoken tuberculosis gave positive results to the delicate sub-dermal test only with relatively large doses. In consideration of this and the fact that tuberculosis is more frequent in the spring than in the fall, he believes that susceptibility to tuberculosis is greater in the spring. Without accepting these conclusions it is of interest that our worst results—those obtained with tuberculin "No. 1"—were obtained during the period from mid-July to mid-winter, while the ensuing months until July the following year were applied first to the use of "No. 2" and then to "No. 3." Consequently it was felt that simultaneous tests would be necessary in fairness to the preparations under consideration. It was also desirable to broaden the scope of the investigation to include samples of tuberculin from other manufacturers, and three more commercial tuberculins were obtained for this purpose, making six in all.

In this part of the work the Pirquet test alone was used; it was chosen because it seemed to offer more assurance that each patient would receive an equal dose of each tuberculin than would be afforded by the intracutaneous technique. The simultaneous tests were performed upon 25 adults and 3 children whose reactions were known to be positive; they were examined at the end of 24 and 48 hours and the reactions were graded from the least, which could be described as definitely positive—grade 1— to the most severe, which was called grade 4. By thus grading the severity of the reactions a more accurate comparison of tuberculin activity could be secured than if positive and negative reactions alone were considered. The results are indicated in Table 2. It is seen that "No. 3" tuberculin—the Saranac preparation—distinctly exceeds any of the five commercial products not only in the number of actual positives but in the severity of the reactions produced. The other important fact brought out by this table is that the commercial products studied vary greatly from each other in activity and are without exception inferior preparations.

TABLE 2

	24 hrs. Tuberculin Nos.						48 hrs. Tuberculin Nos.					
Case	1	2	3	4	5	6	1	2	3	4	5	6
1	1	0	1	2	1	1	1	0	1	1	1	1
2	0	1	2	2	1	1	0	2	2	1	0	1
3	0	0	2	1	1	0	0	0	0	0	0	0
4	2	2	2	2	2	2	2	2	1	1	2	1
5	2	1	2	2	1	1	s	3	2	1	1	2
6	1	1	1	2	1	1	1	1	1	2	1	1
7	1	2	4	1	1	2	1	2	3	1	2	2
8	1	2	2	0	1	1	1	2	2	1	2	1
9	1	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	2	2	1	1	2
11	0	1	0	1	0	0	0	1	1	1	1	0
12	1	0	1	1	1	1	1	0	1	1	1	1
13	0	2	2	1	0	1	2	3	3	s	1	2
14	1	2	1	2	2	2	2	2	2	1	2	2
15	–	–	–	–	–	–	0	1	2	0	0	2
16	2	1	3	1	2	1	2	1	3	1	2	1
17	0	0	s	0	0	0	1	1	2	1	1	1
18	1	1	2	1	2	s	2	2	2	1	2	2
19	s	s	2	1	s	s	0	0	2	2	0	0
20	0	0	s	0	0	s	0	0	0	0	0	0
21	0	1	2	1	s	0	0	1	2	0	1	0
22	1	0	1	1	s	1	0	0	1	1	1	0
23	0	1	1	0	1	1	0	1	1	0	1	1
24	1	1	2	1	1	1	2	2	2	1	2	2
25	0	0	s	0	0	0	0	0	0	0	0	0
26	3	2	4	1	3	2	2	2	4	1	2	2
27	2	1	2	0	2	1	2	1	1	0	1	1
28	0	0	0	0	0	0	0	1	1	0	0	1
positive	16	18	22	20	18	18	16	21	25	19	21	21
severity score	22	24	41	26	25	22	24	30	45	21	29	24

The findings indicate that the tuberculins studied, with the exception of "No. 3," are not suitable for use in determining the presence of the tubercular infection by any method whatever and that their use in previous investigations may be a cause of the lack of uniformity which appears in the results.

REFERENCES.

1 Norsk Mag. f. Laege Vidensk., Vol. 5, 508, 1916.
2 N. Y. Med. Jour., Vol. 107, 1018, 1918.
3 Am. Jour. Dis. of Children, 1922, Vol. 23, 481.

Study II.

Incidence According to Tuberculin Tests and Methods of Applying Tuberculin.

Not too widely recognized is the fact that in living subjects, the absence of infection with the tubercle bacillus can be conclusively demonstrated only with difficulty. By single or repeated Pirquet tests which are the basis of so many attempts to determine the incidence of the infection, it appears to be possible to detect tuberculosis in slightly over half of all cases where the infection has taken place. By the subcutaneous use of tuberculin in successive injections of increasing dosage, this possibility of detection is evidently greatly increased. Ac-

cording to Hamburger[1] the reception of a dose of 1 mg. of tuberculin by this method, without a reaction, may be taken as nearly absolute evidence that the child is free from tuberculosis. According to the same author this statement has been confirmed by Reuschel, Nothmann, Pirquet, and Rominger. But this amount cannot be safely administered without first obtaining negative responses to successive smaller doses.

This method is satisfactory in individual cases where the need for diagnosis is a matter of relative urgency, although time consuming, but, requiring as a maximum, four injections at intervals of 48 hours and daily observation for a period as long as 8 days; the determination of the incidence of the tubercular infection in ambulatory dispensary patients would be attended by the greatest difficulty, although a large number of patients might be observed through one or two of the tests. For such ambulatory and comparatively irresponsible patients there appears to be no method of making this determination which is reliable and at the same time practicable. It is desirable that a method be devised by means of which a test may be completed at most in 48 hours and with a small percentage of error.

Cutaneous applications of tuberculin, whether by Pirquet's technique, or modifications of this, or by inunction, and intracutaneous injections of tuberculin seem to depend for their result upon a cellular reaction. The febrile disturbance resulting from the subcutaneous injection of tuberculin in an infected person indicates a probable humoral reaction. If the body fluids contain substances which, by concentration or by accessibility, react more sharply or more consistently to tuberculin than do the epidermal cells, then one cannot expect, by changes of technique alone, to produce a dermal or intradermal method which will be 100% efficient. The essential difficulty of the dermal method, however, seems more probably to be that of obtaining satisfactory contact between the tuberculin and the more actively sensitive cells of the skin. If the intradermal application, on the other hand, proves to be really less effective than subcutaneous injection, as Hamburger suggests, the authors believe that irregular dosage, due to difficulty in controlling the children during the injection, and leakage of the tuberculin from the needle hole, may account for the deficiency.

Having no feasible method of determining the true incidence of the tubercular infection in our dispensary children, the value of this study and its design lies in demonstrating to what extent care of technique aided by a combination of dermal and intradermal methods and selection of tuberculin may give value to the results of tests performed at one sitting and completed in one return visit after 48 hours. The obvious reason for selecting these two methods of application, and not the subdermal method, was the fact that elevations of temperature could not easily be ascertained in these children and would unduly vex their parents.

Although over 1200 children were tested with tuberculin in preliminary work and in this and other studies, the results which we are now reporting are those obtained from only the last 346 whose tests were done under the most favorable conditions. In all these we had the benefit of a tuberculin of high activity. Two Pirquet and two intradermal applications were made upon each child. Full strength human O. T. was used in the Pirquet scarifications which were made with the usual "borer" through the drop of tuberculin, a modification which gave distinctly better results than were obtained by applying the tuberculin after the scarifications were made. For intradermal testing it was necessary in preliminary work to determine a dilution which would give a maximum number of positive reactions, without at the same time causing ulcerations or other undesirable results. For this purpose dilutions in normal salt solution of 1:1000, 1:500, 1:250 and 1:100 were tested. Dilutions of 1:1000 were found to be practically inert. Dilutions of 1:500 produced about 3% fewer reactions than those of 1:250, and dilutions of 1:100 only about 2% more than those of 1:250. In the 71 children tested with 1:100 tuberculin intradermally, however, two reacted so severely that it was thought undesirable to continue this dilution although actual ulceration did not result. These trials were carried out with a preparation of tuberculin which was later found to be one of the weakest of the commercial tuberculins. The suppositions would therefore be that dilutions stronger than 1:250 of an active preparation would be likely to cause severe reactions and that there might be greater differences in percentages between the results of the different dilutions. The 1:250 dilution was thereafter used in a great many cases and with the most active tuberculin, never causing reactions so severe as to necrose the epithelium. The calculated dosage of each dilution in the order named was .02 mg., .04 mg., .08 mg., and .2 mg. Inaccuracy is inevitable in the dosage chiefly because some children will not stay quiet and partly because of leakage through the punctured epithelium after injection.

The human tuberculin used was that furnished by the Saranac laboratories at Trudeau, N. Y., which we have shown to be an active and satisfactory preparation. In addition, one test was made with bovine tuberculin from the commercial laboratory which supplied the previously designated "No. 2" human O.T. This bovine test was an intracutaneous injection of the same dosage as that done with human O. T. Thus four simultaneous tests were performed upon each child; two Pirquet tests with human O. T., one intradermal with O. T. 1:250 (.08 mg.), and one intradermal of bovine tuberculin similarly diluted and averaging .08 mg.

per dose. The tests were examined after an interval of 48 hours.

The 346 children gave positive reactions in 57.1% and the average age was 8.1 years. The average age is, we believe, an excellent aid to the comparison of results in children and might well be included in all such reports as this. It is calculated in this study as the total number of years represented, divided by the total number of children. Those who were below 1 year of age were reckoned as 0 years. For example, if a group contained 10 children under 1 year old, 10 who were 3 years old, 10 who were 5 years and 10 who were 7 years old, the total ages would be 150 and the average age would be 150÷40 or 3.7 years. The percentage of positive reactions obtained for each year of life is seen in Table 1.

0-1 yrs. 25%	5-6 yrs. 62%	10-11 yrs. 84%
1-2 yrs. 54%	6-7 yrs. 50%	11-12 yrs. 60%
2-3 yrs. 60%	7-8 yrs. 66%	12-13 yrs. 61%
3-4 yrs. 54%	8-9 yrs. 60%	13-14 yrs. 62%
4-5 yrs. 33%	9-10 yrs. 70%	14-15 yrs. 87%

The irregularities of progression from year to year which are indicated in this table are without doubt due to the small numbers of each age represented. Comparisons may be made between these figures and those of Hamburger, who obtained positive reactions in 95% of children in Vienna between the ages of 11 and 14 years, by successive subcutaneous injections of increasing dosage. Pirquet's own figures for these ages, as quoted by Hamburger, were only 56%. From Table 1 there appears to be a disproportionately high rate of infection during the first three or four years of life, at least 50% of the children having then become infected, notwithstanding the deficiencies of the tests employed.

The results of these tests indicate that a combination of the cutaneous method of Pirquet and the intracutaneous method of Mantoux may be used to advantage in groups of patients whom it is desirable to test at one sitting. By further refinement of such a combination we believe it possible to determine the incidence of the infection to within 20% of actualities as indicated by the more cumbersome method of Hamburger. Our bovine tuberculin was a commercial product. The human O. T. prepared by the same house was one of the best of the commercial preparations but distinctly inferior to that from Trudeau. Although we did not test the comparative activities of different bovine tuberculins, it is presumable that a more active preparation than ours might be used with improvement upon our results. About 10% of the reactions included in Table 1 were due to this bovine tuberculin alone, thus representing the importance of using this substance in tests of this sort.

The Pirquet method using human O. T. alone would have demonstrated 85% of all the cases of infection detected by this combined method and is distinctly a more effective test when properly performed than the intradermal method with the dilution and dosage used by us. We would not recommend an initial injection of a greater dose than .1 mg. of an active tuberculin: The maximum initial dosage of the Trudeau preparation and the one consistently used was only .08 mg., yet the wheals produced by this amount were occasionally severe. At least 15% should be added to the results from Pirquet's test by this additional injection of .1 mg. of human and bovine tuberculin intradermally.

REFERENCE.

1 Hamburger: Am. Jour. Dis. of Children, Vol. 23, 481.

Study III.

Incidence of Cervical, Epitrochlear and Peribronchial Adenitis.

In the course of observations to determine the incidence of the tubercular infection of children of the dispensary class in Boston, we were led by the reputed susceptibility of the lymphatic system at this age to attempt a short comparative study of glandular enlargements in patients giving positive and negative reactions to tuberculin. Beginning this study late in the course of our other work, only 165 patients were accumulated who were examined particularly for this purpose. These children were not selected except that all were older than two years. The examinations of the glands were made in every instance before the results of the skin tests were known.

The lymphatic structures selected for this study were the anterior cervical, epitrochlear and peribronchial glands. The condition of the anterior cervical group was noted because of their liability to scrofula and because of the doubtful frequency of tubercular lesions and tubercular pathways in and through the tonsils. Enlargement of the epitrochlears is easy of detection and is always an interesting finding, especially since a luetic significance has become attached to such enlargement. The examination of these glands was undertaken to determine the influence, if any, of the tubercular infection upon the lymphatic system as a whole. The examination of the peribronchial gland group was, of course, directly indicated by their reputed relation to early tuberculosis.

Although the number of cases so examined is smaller than is desirable, they were those whose tuberculin tests were performed under the most favorable circumstances, using the very active tuberculin furnished us by Dr. E. R. Baldwin of the Saranac Laboratory. Tests with

bovine tuberculin from a commercial laboratory were also performed and the application of both tuberculins was done by the Pirquet method and by the intracutaneous method in each patient, about .1 mg. being the dose received by injection. It happened that of the 165 children so examined, 88 gave positive reactions and the incidence of the enlargement of the three groups of glands in these children is compared with that found in the 77 patients not reacting to tuberculin.

As was expected the anterior cervical glands were palpable in more than half of all the children. The frequency of the enlargement was practically the same whether the tuberculin reactions were positive or negative—57.9% in the positive cases and 58.4% in those not reacting. Except for one consideration this result is rather strong evidence against the frequently expressed view that the tonsils serve as a portal of entry for the bacillus of tuberculosis. The one factor which weakens this conclusion is the fact that all of our cases were taken from the medical clinic and were thus deficient in as many cases of scrofula of the neck as would appear in 165 children taken equally from the medical and surgical clinics. We do not believe that this deficiency seriously alters the significance of our result and we are to report later some strongly corroborative evidence from the histologic examination of a large number of tonsils.

Our examination of the incidence of epitrochlear glandular enlargement disclosed the interesting fact that 30.9% of children of our dispensary class in Boston show this enlargement. It would be gratifying to learn just what influences act to stimulate the enlargement of these glands, but it is hardly conceivable that the cause was luetic in more than a small number of these and we conclude that palpable epitrochlears is a common finding and more often due to other causes than syphilis.

Of the 88 children who reacted to tuberculin 31.8% had palpable epitrochlears, and of the 77 who failed to react, 30% showed enlargement of these glands. This comparison suggests that the primary tubercular infection in children is not a frequent cause of general glandular enlargement.

It has often been pointed out that tuberculosis is an important cause of peribronchial glandular enlargement. In examining patients for this condition we depended entirely upon the presence or absence of D'Espine's sign and the examination was made in each instance by the same person, thus excluding variations in interpretation which would otherwise be likely to occur. The children giving positive tuberculin reactions showed a positive D'Espine in 48.8% of the 88 cases, while those who did not react showed enlargement of these glands in only 33.7% and it must be remembered that this contrast would probably be more marked if more intensive tests with tuberculin were carried out. Our findings, therefore, are corroboratory of the tubercular significance of a positive D'Espine's sign.

A PAINLESS, LITTLE LUMP ONLY AS BIG AS THE TIP OF HER LITTLE FINGER AND YET, IF NEGLECTED, IT WOULD SURELY HAVE KILLED HER, AFTER MONTHS OF TERRIBLE SUFFERING.

BY W. W. KEEN, M.D., PHILADELPHIA,

Emeritus Professor of Surgery, Jefferson Medical College.

This is the brief and happy story of a wise woman who sought and immediately followed advice in a case of malignant cancer of the breast.

A personal friend, a woman of fifty, rather stout, with a considerable layer of fat under the skin which obscured the evidence of any lump, while bathing discovered a lump, only as large as the end of her little finger, on the outside of the left breast, near the armpit. Three days later she consulted me.

On examination, at first, as it was so small and embedded in fatty tissue, I found difficulty in discovering it. As I had retired from practice a few years before, I referred her to one of my surgical friends in her own city. He operated upon her as soon as arrangements could be made. He first made an incision over this little and apparently trifling lump, cut it out and had an immediate microscopic examination made. Within a few minutes the microscopist reported that it was a malignant form of cancer, which required an immediate, complete operation. At once he prolonged his incision and completed the operation, removing the breast and cleaning out the tissues from the armpit, including all the glands, and also removing any of the muscular tissues that could possibly be involved. The patient made an uninterrupted recovery, in a few days.

This case illustrates the good sense of this woman. She had not had a single twinge of pain in this lump, but the moment she found it, she sought surgical advice and followed it.

In my opinion her future is secure. The lump was so small and had evidently been there so short a time, that there was no discoverable enlargement of the glands in her armpit. I think she has just as good a prospect of completing her expectation of life as any other healthy woman of her own age.

If only every woman would act as promptly, regardless of the absence of pain, how many a tragedy would be avoided!

A few reprints of The Treatment of Diabetes Mellitus, by Elliott P. Joslin (BOS. MED. AND SURG. JOUR., June 22, 1922), are available and may be procured by applying at this office. Price 50c.

New England Hospital Association.

ANNUAL MEETING MAY 17 AND 18, 1922, AT BOSTON MEDICAL LIBRARY.

(Continued from page 667)

The Nurses' Home.

BY MISS GRACE HASKELL, SUPERINTENDENT OF WENTWORTH HOSPITAL, DOVER, N. H.

When Dr. Howland wrote asking me for a ten minute paper on any one of six or eight subjects, I glanced over the list hastily and thought I might be able to say something about a Home for Nurses in reference to the small hospital.

Our New England States are full of small hospitals from fifteen to one hundred beds capacity. It is very safe to say that in those hospitals under thirty beds and many over that number there has been no real provision for the housing of the nurses connected with the institutions. Upon investigation it would be found that the pupils, if any, the graduate nurses and the executive force are to be found in the same building with the patients, usually on the upper floor or in rooms adjoining patients' rooms. When this arrangement exists,—and it exists often enough to be the rule, and not the exception,—there is absolutely no freedom of speech or conduct possible for the personnel of the hospital. The wonder is with this arrangement that small hospitals ever have pupil nurses, and the question arises, ought they to have them under these conditions? The dining-room is never adequate. The meals are hurried; nurses do not get away from the hospital atmosphere during the twenty-four hours, and the accident cases, the emergency cases and the obstetrical cases are always in her immediate background. Inevitably she must leave the hospital for the change and recreation which she should be able to get by going off duty. She cannot entertain her friends because there is no place provided, and if a young man friend, she probably spends her evening going to the movies and walking back afterward to the place which should be home, and which only offers an opportunity for her to eat, work and sleep. I am speaking now of the small hospital as I have repeatedly seen it. Fortunately, the past ten years have seen a great awakening in hospital boards and executives in regard to the housing of the nurse and the manner in which she spends her time when off duty. It has been demonstrated beyond dispute that the hospital, small or large, that gives its nurses proper living conditions has more pupil nurses in proportion than those who do not. The young woman of today is wise in her generation, flapper though she be. She selects her training school with a very careful idea of its advantages and a keen observation of the home she is to live in for three years or less. Just what should we give our nurses for a home? At least, it should be as good as that she came from. Most of the young women in training schools come from the great middle class that is the backbone of the nation. The parents wish their children to have the things which they themselves, perhaps, had to do without. They strain every energy to put their girls through High School, and having done this they feel she is on the right road toward self-support. A girl leaves this home where she has had love, freedom of expression and a perfect equality, and, if she enters a training school, she comes to—what? We feel compelled to answer, very little love, no freedom of expression, for at least eight hours of the day, and a discipline such as she in her young life never imagined. What are we going to do for her to compensate her for the loss of her family life? This brings us directly to the housing conditions.

First, let us have a building for our nurses entirely separate. If connecting corridors are necessary, let them be long enough and the entrance to them as far from the living quarters as they can be. Give each girl her own room that there may be one place where she can "loaf and invite her soul." Have toilet and bath room facilities on every floor, adequate for the needs of the number to be served. Small tables in the dining-room where different classes can join each other three times a day and exchange a little conversation that is not shop. This room should be bright, cheerful, with a fire-place if possible, and should always be in the home. Have one large living room,—large enough for general entertainment; two or three smaller sitting rooms, making it possible for the young woman to receive her friends alone if she prefers. Give them a laundry where they are at perfect liberty to go for any amount of washing or pressing. We all know it is not possible for a hospital to take proper care of the lingerie and transparent waists that are so generally in vogue. Have the class and demonstration rooms in the home. Nurses off duty will appreciate this, and nurses on duty will enjoy the change from the hospital. Give the nurses the privilege of serving simple refreshments to their friends at least once a week. Inaugurate a tea hour from four to five daily. Musical instruments, of course, should be provided. If there are porches, have chairs enough to seat half the school at least. A tennis court and croquet ground would afford good fun and much-needed out-of-door exercise. If I had sufficient funds I am sure I would install a bowling alley.

The home should not be luxurious but comfortable; the necessities balancing; the atmosphere one of freedom without license; the rulings controlling the home as few as are compatible with the protection of the building and its occupants. A gentle woman to act as housemother and have supervision of the necessary housework. Each home for nurses, large or

small, has its own problems. Probably student government is a good thing for the student. If it could only include the proper care of the equipment I should encourage it, but it does not because there is a lack of mature judgment as to what is good care, and very little thought as to the cost of maintenance.

If the home is owned by a city there is usually a strict accounting from time to time as to the why of this expense, and the necessity of that, and the superintendent of the hospital has that accounting to do often to a group of politicians who do not really care to be shown the facts, but only wish to talk. Our hospital is just completing a nurses' home. This hospital opened in 1906 and had built for the accommodation of the nurses a wing consisting of eleven sleeping rooms, two baths, one class and one living room. These accommodations were out-grown in two years. The hospital increased its work rapidly and at the end of ten years had grown from a thirty bed to a fifty bed hospital and by the middle of June will be an eighty-five bed hospital. For fourteen years the nurses have been moved from pillar to post, and if there is any superintendent in this audience better qualified as a furniture mover than myself, I should be very glad to meet him or her at the end of the session.

Our troubles in regard to room were ended when Mr. E. W. Rollins, a generous townsman, gave us a nurses' home as a memorial for his son's wife, Mrs. Gladys Rollins. This building is erected at the cost of $81,000, not including equipment. We have four floors, the two upper ones devoted to sleeping, bath and small sitting rooms; the ground floor to living room, sitting rooms, dining room, serving pantry, with three or four smaller rooms for each its special use. The basement has a class and demonstration room, laboratory, dietetic kitchen, laundry, trunk and boiler room. These are for the nurses' use exclusively. The donor, the architect, the trustees, and the superintendent, have been in perfect accord since the plans were first presented and accepted. The aim of all has been to keep the building a home in as true a sense as possible. The sleeping rooms are finished in white and yellow; the bathrooms in gray marbleloid. Toilet and bath facilities are adequate to the number to be served. The dining room is in buff and white with mahogany doors, a very beautiful room with a large fireplace. The living room, a replica of that of the donor, has a very large fireplace and is beautifully lighted by four large windows and French doors. The small sitting rooms are finished in ivory and white. On either end of the home French doors lead to broad porches. The fireplaces in the living, class and dining rooms are a source of great pleasure to the nurses already. The corridors are in buff and white with mahogany. There is not one dark corner in the entire home from attic to basement. The first impression one receives on entering the home is the cheerfulness, which is a natural result of the color scheme.

I need not further discourse about our particular home, but I will say many of the ideas that I myself have had, have been incorporated in it and it would be impossible for any superintendent to have had a more interpretive and sympathetic architect to deal with or a more liberal, progressive Board of Trustees. The donor, a man of very large experience in business life, has co-operated, as I have before stated, with all three.

Our plan is to keep our nurses happy and we have tried to have that happiness come from within the home.

Dr. Howland: I am sure there is plenty to talk about on a paper of this kind. The Nurses' Home is open for discussion.

Miss Hall, Peter Bent Brigham Hospital: I should like to endorse nearly everything Miss Haskell has said, particularly the single bedrooms. To make the nurses' living quarters attractive, nothing is so much needed as small rooms in which to entertain their guests. Not enough attention is given to that in planning nurses' homes. Another thing I should like to emphasize is the proper equipment of class rooms; I think we ought to have more complete teaching rooms than we have. I want to put in a plea for adequate class rooms; not only a room for lectures, but a generous room for demonstration, with proper equipment, and a utility room connected with it, corresponding to the utility rooms in the wards, so that all articles used in teaching and in demonstration can be placed in that utility room. I think this has been worked out in some institutions; I think Miss Doherty has worked it out at Holyoke.

Miss Doherty: We have just had a new nurses' home, of which we had long been in need. For several years, the nurses lived in a part of the hospital. Our hospital has 125 beds, and we have had the disadvantage of having no nurses' home for many years. It was only this year that we succeeded in getting a nurses' home, and already the applications for entering the training school have increased. I should like to offer that as the solution of the problem of the shortage of nurses. We think that it is going to be a great drawing card in securing applicants. Our home is a fire-proof structure, of three stories, and accommodates fifty students in single rooms. The living room has a beautiful fireplace. It also has French doors and a very appropriate lighting system. Down stairs we have class rooms and a recreation room. We also have what Miss Hall spoke of, a utility room, planned as nearly as possible like the utility room in the wards. We have sun porches, a tea room, and kitchen. We also plan on teaching chemistry and domestic science in the nurses'

home, so we have a chemical apparatus and facilities for teaching practical cooking. Our aim has been to have certain people give certain rooms as memorials. The home was built by the citizens of Holyoke. Several prominent citizens have been interested in certain rooms, and therefore we have been able to have a little more elaborate equipment than we could have had if the hospital itself had had to provide it. The nurses appear to be delighted with it. Already they have plans to have their friends come and see them. Probably the best thing yet done for the hospital and for the training school has been to open the nurses' home. We invite anybody to inspect the building.

DR. HOWLAND: What are your standard furnishings? or are they uniform?

MISS DOHERTY: They are not uniform. We haven't yet got it completely furnished. We took our furnishings which were in the students' rooms and had that renovated, and added to it when necessary. Each room has a white bed; we have no couches; the general feeling was that the student would prefer a single bed. Each room has a rocking chair and a straight chair. Some of the rooms have been provided with a table and a book rack. Each room has a dresser, and each has also a student's desk lamp. there is also general illumination from the ceiling. We have throughout the nurses, home the vapor system of heating. Our old quarters were very noisy, with the old form of steam radiators. The vapor system is noiseless, and the heat can be turned on from one-fourth to three-fourths.

Q. What is the floor covering?

The floor is reënforced concrete, with linoleum covering. There are bathrooms at each end of the building, with fixtures of the most improved kind. There are groups of three rooms for the staff; they have their own bathrooms. We have no sitting rooms for the staff, which was felt to be a disadvantage; but we are to have a large living room, a small reception room, and down-stairs, a recreation room. They have a reference library.

DR. HERSEY: Mr. Lee has a new addition to his nurses' home—a bowling alley and most artistically fitted-up rooms.

MR. LEE, Waterbury Hospital, Conn. We are one of the few Connecticut hospitals that have had no real difficulty in getting pupil nurses, and I attribute it almost entirely to the fact that we have what we call a good nurses' home. Considerably over 50 per cent. of our applicants are recommended by former graduates. The home has ninety-three rooms in all; contains class rooms, demonstration rooms, a utility room, a reference room. We have two bowling alleys, which are used very freely, and are growing constantly in popularity. We have a laundry for the use of the nurses; two reception rooms, one large and one small, where they may entertain their friends. We have a small infirmary and two bedrooms with connected bathrooms, and sitting room adjoining where a girl who is sick, but not sick enough to go into the hospital, may spend a few days. We have found that very advantageous. Every room is fitted with hot and cold water; a mahogany, four-post bed, a dresser, a small writing-table, with a table lamp, as well as other illumination. We have a pretty good tennis court, and we expect to have more than one. We also have an assembly hall on the top floor, used for social gatherings, dancing and otherwise. The floors are covered with linoleum, with rugs on the bedroom floors. There are ample bath facilities on every floor. At the time we put in the bowling alleys, we first planned on swimming pools, but when we looked into it we found the cost of upkeep was rather prohibitive. We were also influenced a little by the fact that the public schools have a swimming school, which is open to the public, and we have one night a week when the nurses attend the swimming school. They take advantage of that; there were twenty-two in the last class.

MISS RIDDLE: There is much to be said in the way of appreciation of Miss Haskell's paper. I want to emphasize the point she made regarding the person in charge of the home. The person in charge of the home should be a refined woman, and I believe she should also be someone who is not a nurse, in order that the students may come in contact with someone from the outside world. If she is a refined woman, with a good personality, their happiness will be by so much increased. It is good policy to have a woman of the right kind, for it certainly does have an influence on the character and the number of applicants to the training school. It is very common in these days for the parents to come with the girls when they come to the hospital to make application, and when they find that the girls are under the care of a competent and desirable woman, they encourage them to come.

MR. STEVENS: I am very glad all these points were brought out in regard to the nurses' home becoming a real school for nurses and that in many of the newer homes school facilities are being accentuated. It seems to me that we should provide the nurses' home with every facility, so that the initial teaching of the pupil nurses may be done in the home itself. It seems to me that we should have a real ward, with real beds, with enunciators, with sick-rooms, with the equipment found in the hospital, so that the pupil nurse would find there every bit of equipment that she would find in the hospital, and begin the experiment on the Chase doll, and not on the patient later. I think labora-

tories should be provided, and other class rooms as well, so as to make it a real school for the pupil nurse.

Another point, which has not been brought out, is the matter of providing for night nurses—whether they should be in a separate part of the home; whether nurses while on night duty should move from their own rooms to a section devoted to the night nurses, or whether their rooms should simply be placarded, "Night nurse sleeping," or something of that sort. Another question, Is it desirable to have in every nurse's room running water, instead of having wash-bowls in the general toilet? That seems to me to be rather an important thing. Just how far should we carry the infirmary in the nurses' residence? Should we make it a real section of the hospital where the nurse could be carried through a slight illness, with an attending nurse? Also whether we should provide them with facilities for doing a little cooking, or preparing poultices, or anything of that sort; whether we should make a separate little infirmary? These are the reactions which occurred to me.

Dr. Howland: Mr. Stevens asks: Shall night nurses going on night duty give up their rooms, and move to rooms set apart? or shall their own rooms be placarded? Is it desirable to have running water in each nurse's room? How far should we go in having an infirmary in the nurses' home?

Miss Hall: There should be separate rooms for night nurses. I think it is most desirable to have separate rooms for night nurses, where they shall go to sleep, but most undesirable to make her move her belongings to those rooms. Nurses are constantly moving, as it is. She lives in one part of the hospital as a probationer; then later she moves to another room, then she goes on affiliation and moves to another hospital; then she goes back to her own hospital. The result is she is moving all the time she is in the hospital; and to be required to move when she goes on night duty and again when she comes off, is too much. The day of moving is a hard and interrupted day. I know, because I have been through it myself. A day of moving means that the nurse doesn't get much time for sleep when she is going on duty at night. For nurses doing night duty, quiet rooms should be set aside, shut off by fire doors or silence rooms; then the nurse should be allowed to retain her own room during that period of night duty.

Q. How much is the additional cost of putting running water in the rooms?

Mr. Lee: I can't tell; but I think it is well worth every dollar put into it.

Dr. Sexton: For the night nurses, we have provided a building away from the nurses' residence and away from the hospital, where all night nurses sleep. There is no activity in or near this building. They retain their rooms during the period of night nursing.

Dr. Howland: Miss Haskell spoke about a dining room in the nurses' home. We have somewhere to think about economy, and I should think there was some question about that. It may be very desirable, but it is a distinct additional cost, if you must have a separate kitchen and a separate dining room in the nurses' home. That is duplication. We try to get away from that, and to centralize things as far as possible. Though it might be pleasant, it doesn't seem to me as if it were necessary to have the nurses' dining room in the nurses' home. I think the results, in the long run, might be that they would get fully as good cooking if the meals were all prepared and served from a central kitchen and serving room. There is a very distinct tendency to have the nurses' rooms apart from the hospital, and I am not sure that I am right about this; but it would seem to be an additional expense and perhaps not as essential as other features we might think of.

Miss Haskell: Ours is a small hospital, and we have planned for the transportation of food from the general kitchen by means of a Drinkwater carriage. The distance the food has to go to the nurses' dining room is perhaps not greater than that which the food has to go in a large hospital from the kitchen to the nurses' dining room. How practical a dining room in the nurses' home might be in a large hospital, I am not competent to judge, because my experience has been entirely in small hospitals. The Drinkwater food car is an experiment. At first we planned to have steam tables electrically connected; but after investigation, we decided that we could afford the experiment, because the cost was not very great. We have about eight containers. They advertise that hot things will keep hot, and cold things cold. If they don't stay hot, our nurses will still have hot food, because we have facilities, in a large serving pantry which is connected with the dining room, for keeping things hot.

(To be continued.)

SMALLPOX IN THE PHILIPPINES.

The Monthly Bulletin of the Philippine Health Service reports that for the month of May, 1922, no deaths from smallpox in the Provinces were reported and no cases were reported. Since January there have been 183,254 vaccinations. When smallpox in the Philippines takes its place among the vanishing diseases some of the ammunition of our anti-vaccinationists will be denied them.

THE RIGHTS OF TENANTS CONCERNING THE FURNISHING OF HEAT.

Some annoyance has been expressed from time to time by some tenants because of alleged indifference of landlords to the discomfort of inadequately heated apartments. Under some circumstances the lack of heat may be a health problem.

The Commissioner of Health of the City of Boston has furnished a reprint of the law relating to this matter as follows:

[CHAP. 357.]

AN ACT EXTENDING THE PROVISIONS OF LAW AFFORDING TEMPORARY RELIEF TO TENANTS.

Be it enacted, etc., as follows:

Section 1. Section two of chapter two hundred and fifty-seven of the General Acts of nineteen hundred and nineteen, as amended by chapter five hundred and thirty-eight of the acts of nineteen hundred and twenty and by chapter four hundred and eighty-nine of the acts of nineteen hundred and twenty-one, is hereby further amended by striking out, in the third line, the word "February" and inserting in place thereof the word:—July,—so as to read as follows:—Section 2. This act shall take effect upon its passage, but shall become null and void on the first day of July in the year nineteen hundred and twenty-three.

Section 2. Section two of chapter five hundred and fifty-five of the acts of nineteen hundred and twenty, as amended by chapter four hundred and ninety-one of the acts of nineteen hundred and twenty-one, is hereby further amended by striking out, in the second line, the word "February" and inserting in place thereof the word:—July,—so as to read as follows:—Section 2. This act shall become null and void on the first day of July in the year nineteen hundred and twenty-three.

Section 3. Section six of chapter five hundred and seventy-seven of the acts of nineteen hundred and twenty, as amended by chapter four hundred and ninety of the acts of nineteen hundred and twenty-one, is hereby further amended by striking out, in the second line, the word "February" and inserting in place thereof the word:—July,—so as to read as follows:—Section 6. This act shall become null and void on the first day of July in the year nineteen hundred and twenty-three.

Section 4. Section three of chapter five hundred and seventy-eight of the acts of nineteen hundred and twenty, as amended by chapter four hundred and eighty-eight of the acts of nineteen hundred and twenty-one, is hereby further amended by striking out, in the second line, the word "February" and inserting in place thereof the word:—July,—so as to read as follows:—Section 3. The act shall become null and void on the first day of July in the year nineteen hundred and twenty-three. (Approved May 2, 1922.)

In addition the Commissioner has forwarded the subjoined circular which gives an interpretation of the law and advice to tenants, which may be of value to physicians who find patients suffering discomfort from lack of heat in apartments.

BOSTON HEALTH DEPARTMENT.

ADJUSTMENT OF DISPUTES BETWEEN LANDLORDS AND TENANTS CONCERNING THE HEATING OF RENTED PROPERTY.

In view of the very considerable number of complaints received by the Boston Health Department, alleging failure of landlords to supply sufficient heat for premises and parts of premises rented by them, the attention of such complainants is called to the following statement, showing just what the Health Department can and cannot do with respect to the matter and advising complainants as to the course to be followed in order to adjust such grievances as they may have.

1. There is no law nor ordinance which empowers the Health Department to compel landlords to furnish heat to tenants. Whether a landlord is or is not obligated to furnish heat for his tenants depends entirely upon the expressed or implied agreement between the landlord and the tenant. The Health Department is willing enough to investigate complaints relative to the inadequacy of heat in rented premises or parts of premises—and in some cases may even be of assistance in remedying conditions complained of, especially when cases of sickness on the premises make the relation of such conditions to health clearly apparent—but the limited number of the Health Department's inspectors available to attend to such investigations makes it advisable that tenants adjust their grievances by negotiations with their landlords, conducted in a friendly spirit, and, if such negotiations fail, then institute legal actions themselves in the matter in court, without the intervention of the Health Department.

2. The law recently enacted to provide means of procuring prompt action with respect to the matter of heating rented premises or parts of premises reads as follows:

Any lessor of any building, or part thereof, who is required by the terms, expressed or implied, of any contract or lease to furnish water, heat, light, power, elevator service or telephone service to any occupant of the building, who wilfully or intentionally fails to furnish such water, heat, light, power, elevator service or telephone service at any time when the same is necessary to the proper or customary use of the building, or part thereof, or any lessor who wilfully and intentionally interferes with the quiet enjoyment of the leased premises by such occupant, shall be punished by a fine of not more than one hundred dollars, or by imprisonment for not more than six months. (Acts of 1920, chapter 555.)

3. In order that the law set forth above may serve its intended purpose, in those cases in which tenants have been unable to come to any agreement by direct negotiations to procure adequate heat under the terms of their respective leases or agreements, the following condition should be complied with by the complaining tenant or tenants:

A. The complaining tenant or tenants must be prepared to show that there has been a violation on the part of the landlord of the terms of some lease or agreement under which the tenant is entitled to occupy the premises or a part thereof, with respect to the furnishing of heat. When the obligation to furnish heat is not expressly agreed to in a written contract or lease, the tenant must be prepared to show that there has been a violation of some oral or implied agreement in regard to this matter. The tenant will, of course, strengthen his case if he be able to produce witnesses to corroborate any oral agreement in regard to heat, and it would seem that the fact that the landlord has retained control of the heating apparatus, if he has done so, and that it is impracticable for the individual tenant or tenants who are complaining to control and operate it, might be regarded as presumptive evidence of an implied contract on the part of the landlord to furnish such heat as is necessary for the health and the comfort of the tenants.

B. The complaining tenant or tenants must be prepared to show that there has been a wilful or intentional failure on the part of the landlord to furnish the heat required by the lease or agreement. To this end a written record should be made of actual thermometer readings of temperature, and of the location of the thermometer in the apartment and of the time when such readings were made. If possible, the correctness of this record as to thermometer readings, location of the thermometer and time of the readings should be verified by two or more persons. If more than one tenant joins in the complaint, each should keep his own independent thermometer readings. Thermometers should be provided for this purpose if not already available.

C. If with such a temperature record as is described in the preceding paragraph the complaining tenant has been unable to adjust his differences with his landlord, and if he still feels that the matter must be carried into court, then the complaining tenant should be prepared to show by written evidence or by indisputable oral testimony that the attention of the landlord has been called to the inadequacy of the heat furnished by him and that he has "wilfully or intentionally" failed to furnish sufficient heat.

D. The complaining tenant must then present himself to the clerk of the municipal court in the district in which the property with respect to which the complaint to be made is located and make to said clerk a complaint against the landlord for violation of the law quoted above. In making such a complaint it is not necessary that the tenant should produce all of the evidence he has tending to establish a violation of law on the part of the landlord, although there is no reason why he should not do so; but the tenant must present enough evidence of a lease, contract or agreement to furnish heat and of a failure to do so to make out a probable case of a violation of law. When the case comes before the court, however, the complaining tenant must be in readiness to present all of his witnesses and such other admissible evidence as he may have on which he relies to show a violation of the law.

4. It is urged by the Health Department, not only in the interest of the maintenance of harmonious relations between landlords and tenants, but also with a view to the saving of the time and patience of tenants and landlords and the saving of the time of the court, that no case be presented to the court that can by any possibility be adjusted by negotiations directly between the parties interested.

EXCERPTS FROM THE NEWS LETTER.

ISSUED BY THE NATIONAL COMMITTEE FOR THE PREVENTION OF BLINDNESS, INC.

If any state legislation is needed which provides either directly or indirectly for the prevention of blindness and the conservation of vision, steps should be taken at the earliest moment to formulate bills and to arouse public opinion in their favor.

The National Committee for the Prevention of Blindness will be glad to be of service to any state or local organization considering state legislation. It will send the Field Secretary, in so far as his time will permit, to any state seriously contemplating such legislation, either before the meeting of the legislature or during its session.

The courses on the education of the blind given during the past two years in the Graduate School of Education of Harvard University have proved so successful that they have become a recognized part of the curriculum. This year's course opened Friday, October 6th. It is being conducted by the Graduate School of Education with the co-operation of the Massachusetts Department of Education, Division of the Blind, and the Perkins Institution for the Blind. Mr. Edward E. Allen, Director of Perkins Instution, will have charge of the course and give a majority of the lectures. With Mr. Allen will be associated Mr. Charles B. Hayes, Director of the Division of the Blind, Massachusetts Department of Education.

The course will, as heretofore, include a survey of the movement for special education for those suffering from seriously defective vision.

Dr. W. H. Hamer, Medical School Inspector of London, England, has come to the conclusion that school girls have too much work to do and that in consequence they suffer more than boys from defective vision, heart disease, anemia and spinal curvature. These can all be traced, he claims, to the same set of causes,—less opportunity for play than boys, less time spent in the defective vision, heart disease, anemia and spinal curvature. These can all be traced, he claims, to the same set of causes, less opportunity for play than boys, less time spent in the open, the performance of household duties, and a difference in school curriculum. He suggests that at least a part of the difficulty might be solved by having the boys share domestic tasks.

The latest figures of the war blind entitled to government compensation are 636. Of these, 311 are totally sightless and 325 partially blind. Training had been given to 242 of the war blind at Evergreen prior to December 31, 1921, when the Institute was turned over to the Veterans' Bureau.

The Massachusetts Medical Society.

MEMBERSHIP CHANGES FOR THE MONTH OF OCTOBER, 1922.

OFFICIAL LIST (9TH).

Compiled by the Secretary.

Fellows should consult the lists of those allowed to resign, to change their district membership and those deprived for non-payment of dues by the Council, Oct. 4, as published in the *Boston Medical and Surgical Journal* of Oct. 19, 1922.

ALPHABETICAL LIST.

Adler, Herman M., Chicago, now 119 East Huron Street.

Adriance, Vanderpoel, Williamstown, now Spring Street.

Anderson, Frank William, died at Roslindale, Sept. 29, 1922, aged 37.

Benoit, Samuel J., Gardner, office now 18 Parker Street.

Berry, Walter D., from Battle Lake, Minn., to East Longmeadow.

Bone, Herman D., Gardner, office now 19 Pleasant Street.

Brennan, John P., North Adams, now 112 Main Street.

Bunce, James W., North Adams, now 85 Main Street.

†*Bush, John Standish Foster*, died at Hartford, Conn., October 20, 1922, aged 73.

Caines, Richard J. R., Boston, now 47 Massachusetts Avenue.

Carpenter, Robert J., North Adams, now 85 Main Street.

Clare, Wendell P., from Chelsea to Portsmouth, N. H., 426 State Street.

Clark, John Donovan, now Abington, Connecticut.

Cline, Samuel, from Boston (Suffolk) to Dorchester (Norfolk), office Boston, 353 Commonwealth Ave.

Cullen, Charles A., Springfield, from 400 North Main Street to 51 Harrison Avenue.

Cunningham, Allan R., from Boston (Suffolk) to Winchester (Middlesex East), 45 Church Street.

Curran, Arthur M., North Adams, now 63 Eagle Street.

Curran, William L., North Adams, now 63 Eagle Street.

Cutler, Elliott C., Brookline, from 61 Heath Street to 84 Reservoir Road (Chestnut Hill).

Dennen, Ralph W., Waltham, now 301 Moody Street.

Dolan, William Andrew, died at Fall River, October 1, 1922, aged 64.

Donovan, Thomas R., Fitchburg, now 40 Prichard Street.

Du Vally, Alice Butler, Boston, 201 Clarendon Street.

Eliot, Martha May, Boston, office New Haven, Conn., 330 Cedar Street.

Enebuske, Claës J., Boston, now care of Boston Dispensary.

Galleani, Ilia, from Boston to San Francisco, Calif., 655 Stockton Street.

Gangemi, Michael A., North Adams, 34 Ashland Street.

Garbelnick, David A., Haverhill, now 96 Columbia Park.

Gleason, Benjamin W., from Athol (Worcester North) to Boston (Suffolk), 86 Charles Street.

Goss, Arthur V., from Taunton (Bristol North) to Williamstown (Berkshire), 17 Bulkley Street.

Granger, Frank B., office Boston, 520 Commonwealth Avenue, not 520 Beacon Street.

Greene, Thomas Francis, died at Roxbury, October 24, 1922, aged 60.

Gurjian, Leon K., from Worcester to Lynn, 631 Western Avenue.

Hartwell, John B., Colorado Springs, Colo., 1121 North Tejon Street.

Hastings, Robert Worthington, died at Brookline, October 13, 1922, aged 56.

Hopkinson, George, from Akron, Ohio, to Boston, 314 Marlborough Street.

Hurley, Daniel B., East Boston, from 42 Chelsea Street to 158 Princeton Street.

Hutchinson, Charles W., Concord, now 69 Main Street.

Jackson, Roy C., from Middletown, Conn., to Brattleboro, Vermont, 75 Linden Street.

Kelley, Clarence M., Concord, N. H., now The Parker School.

Lavelle, Gertrude H., Natick, now 19 East Central Street.

Luce, LeRoy A., Boston, now 416 Marlborough Street.

McCormick, John Joseph, from San Antonio, Texas, to Honolulu, H. I., Major Medical Corps, U. S. A.

Mella, Hugo, from Cambridge (Middlesex South) to East Milton (Norfolk), office Boston, 106 Marlborough Street.

Merrill, Albert S., from Hudson to Brighton (Middlesex South), office Boston, Massachusetts General Hospital.

Merrill, Ralph E., Kutien via Foochow, Fuhkien, China.

Metcalf, Ben H., from Winthrop to Denver, Colo., 2056 Forest Street.

1901-1922—Millet, Wilfrid Antoine, Pittsfield, 255 North Street. Restored by Council, Oct. 4, 1922.

Myrick, Hannah G., from Roxbury to Dorchester, 58 Sumner Street.

1910-1922—Naurison, James Zuslofsky, Springfield, 172 Main Street. Restored by Council, Oct. 4, 1922.

Owen, Albert S., Framingham, now 18 Union Avenue.

Osgood, George E., from Wells, Me., to St. Petersburg, Fla., R. F. D. So.

1911-1922—Paciaanian, Sumpat Kovork, Lowell, 224 Fairburn Bldg. Restored by Council, Oct. 4, 1922.

Paine, Mortimer H., Maynard, now 31 Main Street.

1904-1922—Pastene, Albert Angelo, Brookline, office Boston, 14 Charlesgate West. Restored by Council, Oct. 4, 1922.

Parker, Willard S., Boston, now 270 Commonwealth Avenue.

Parmenter, Derric C., from East Gloucester (Essex South) to Boston (Suffolk), 68 Pinckney Street.

Perry, Henry Joseph, from Boston (Suffolk) to Brookline (Norfolk), office Boston, 45 Bay State Road.

Pratt, Emily A., from Staten Island to Long Island, N. Y., 4943 97th Street, Woodhaven.

Rochette, Edward C., Worcester, from 20 Portland Street to 14 Channing Street.

Segal, Joseph N., Boston, from 47 Chambers Street to 536 Commonwealth Avenue.

Simpson, Charles M., from Boston to Dallas, Texas, c/o United Fidelity Life Ins. Co.

Smith-Petersen, Marius N., Newton Centre, office Boston, now 31 Bay State Road.

Stowell, Frank E., Worcester, from 37 Pearl Street to 44 Pearl Street.

Tedford, Ada H., from Woburn to Fort Sanders Hospital, Knoxville, Tennessee.

Tobey, George L., Jr., from Boston (Suffolk) to Brookline (Norfolk), office Boston, 270 Commonwealth Avenue.

Tobey, Harold G., from Boston (Suffolk) to Jamaica Plain (Norfolk), office Boston, 270 Commonwealth Avenue.

Tucker, George E., Salem, from 86 Federal Street to 389 Essex Street.

Turner, William K., Capt. Medical Corps, U. S. A., Portland, Me., Fort McKinley.

Watkins, Harvey M., from Hathorne (Essex South) to Belchertown (Hampshire), Belchertown State School.

Watts, Harry A., from Malden (Middlesex South) to Braintree (Norfolk South), office Boston, 100 Boylston Street.

Wesselhoeft, Conrad, Boston, from 535 Beacon Street to 366 Commonwealth Avenue.

Wood, Russell, from Roxbury (Norfolk) to Boston (Suffolk), Boston City Hospital, South Department.

Wood, W. Franklin, from Palmer (Hampden) to Roxbury (Norfolk), 74 Fenwood Road.

Copy for the Directory of January 1, 1923, will go to the printer soon. If you want your address in that to be correct notify the Secretary of any error at once. Changes of address should be sent to the Secretary, Dr. Walter L. Burrage, 42 Eliot Street, Jamaica Plain, 30.

THE BOSTON
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The Journal does not hold itself responsible for statements made by any contributor.

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THE CAMPAIGN AGAINST HEART DISEASE.

Recent publication of discussions concerning the field of preventive medicine in heart disease by Dr. Robert H. Halsey, Vice President of the New York Association for the Prevention and Relief of Heart Disease, and by other interested physicians, makes it worth while to summarize the present status of this very important subject.

Some years ago, just prior to the war, the New York Cardiac Clinics became affiliated and formed the New York Association for Cardiac Clinics. Also there was established in New York City the Association for the Prevention and Relief of Heart Disease, which had a wider outlook and membership and which included on its rolls the members of the New York Association of Cardiac Clinics. There was an interruption of the work of both Associations during the war but in the last three years both organizations have resumed considerable activity and now present to the public, medical and lay, a considerable program of endeavor.

Following the example of New York, other cities—Boston, Philadelphia and Chicago in particular—have organized in varying degrees a campaign against heart disease. The Boston Association of Cardiac Clinics was informally organized in the winter and spring of 1921. On February 23 of that year the chiefs of the Cardiac Clinics in the various hospitals in the city—the Children's Hospital, Boston City Hospital, Peter Bent Brigham Hospital, Boston Dispensary, and the Massachusetts General Hospital—were called together with a few others interested in the work to discuss the organization of an association. The first public meeting was held at the Boston City Hospital on May 20, 1921. At this meeting Dr. Robert H. Halsey, at that time the Chairman of the New York Association of Cardiac Clinics, gave an account of the experiences and work and plans of the New York Association.

During the past winter and spring, 1921-1922, four public meetings were held by the Boston Association of Cardiac Clinics at different hospitals. In November at the Massachusetts General Hospital papers were read on "The Diagnosis of Heart Disease, with Especial Reference to its Importance in Preventive Medicine" and on "Problems for Cardiovascular Research." In January at the Peter Bent Brigham Hospital Dr. William P. St. Lawrence of St. Luke's Hospital, New York City, spoke on "Potential Heart Disease and The Development of Organic Heart Disease in Children." On March 16, at the Boston City Hospital, papers were presented on "The Heart in Industry" and "Exercise Tests and the Vital Capacity." At the Children's Hospital on May 18 of this year there were two papers, one on "Heart Disease in the Community" and the other on "Heart Disease in the Schools."

It is planned to hold four more meetings during the coming season, the first one in November (the 16th) on the subject of "Syphilitic Heart Disease;" one in January (the 18th) on the subject of "Heart Disease in Pregnancy;" and the last two meetings in March (the 15th) and May (the 17th), at which two or three of the following subjects will be taken up: Arteriosclerosis and Heart Disease, Hypertension and Heart Disease, The Prevention and Treatment of Heart Failure, Thyroid Heart Disease, Congenital Heart Disease. There will be again a rotation of meetings in the various hospitals in the city. It is urged that all doctors and medical students, nurses and social workers, and lay people who are interested should attend these meetings.

The Boston Association of Cardiac Clinics is now planning to expand widely into an organization to be called The Boston Association for the Prevention and Relief of Heart Disease. This will be incorporated with a Board of Governors within a few months and there will then be a wide invitation extended for membership of all kinds, in order to obtain further workers in the field and in order to obtain financial support for much-needed progress. Again the support of the medical profession and of the public at large is requested for the very vital work of the study of heart disease.

It was not many years ago that many diseases

were considered, as part and parcel of human life, acts of God. Gradually various infections and other pathological conditions have been combated. Tuberculosis, typhoid fever, diphtheria and malignant diseases have all been attacked. Extensive organizations, particularly in the study and control of tuberculosis and cancer, have existed for years. Steady progress has been made in the control of these conditions, but there is still much to be done. One of the very last diseases to be attacked is that of the heart; now interest has grown up by leaps and bounds throughout the country and throughout the world in the possibility and probability of the prevention of a considerable amount of heart disease. Rheumatic fever, syphilis, hyperthyroidism and the factors leading to hypertension and early arteriosclerosis are the points of attack. Much research is necessary and much education of the public. A national committee has been appointed for the affiliation of the work on the prevention and relief of heart disease in the various cities of this country. We must see that Boston and New England hold up their end of the responsibility in this field of medicine.

SENSATIONAL STATEMENTS IN THE PUBLIC PRESS RELATING TO MEDICAL TREATMENT.

Many newspapers frequently carry references to practitioners of medicine and methods of treatment. These are matters of interest, for disease is omnipresent and people are hoping for cures for all human ills. Some papers seem to be regardless of truth and present unreasonable statements about medicines, surgical operations and work done by members of the medical profession.

At the present time great interest is being taken in the treatment of diabetes by the use of pancreatic extract. Unconfirmed assertions have been made setting forth the revolutionary effects following the use of this agent, and newspapers have published accounts of alleged interviews with physicians. In one instance a prominent physician was reported to have endorsed the "cure." The standing of two large daily papers led the Boston *Herald* to repeat the alleged assertions of this doctor, but upon learning of the categorical denial of the published statements, the *Herald* expressed regret for the error committed in an honorable and manly fashion. We congratulate the Editor for the stand taken.

This JOURNAL finds through a reliable source that the time has not arrived for the publication of definite statements relating to the use of the pancreatic extract in cases of diabetes, because the whole subject is still in the experimental stage. Competent investigators have agreed that nothing further should be published until Dr. Banting has brought forward additional information in his possession and competent investigators have conferred together. It is proposed that when the time for publicity shall have arrived the results of the work done in many laboratories will be published simultaneously in one journal.

The profession should endorse the attitude taken by the scientific workers in this field because the premature announcement of an important therapeutic agent might bring discredit to medicine and work harm to patients. If the pancreatic extract has value, its application will probably have to be subject to carefully regulated dosage and the coincident behavior of the disease will also probably have to be under expert observation. The history of specific medicines demonstrates that even with these drugs, intelligent adaptation to the disease is necessary to get results and protect the patient.

With all gratitude to the men who are concentrating on this problem let us wait patiently for their verdict.

THE SAMUEL FULLER MEMORIAL.

The attention of physicians, and of others interested in the history of medicine and of this Commonwealth, is again directed to the Memorial Fund which a committee of the Massachusetts Medical Society is endeavoring to raise to the honor of Doctor Samuel Fuller, physician of the *Mayflower* and of the Pilgrim settlement at Plymouth.

As long ago as February 10, 1916, the late Dr. Thomas F. Harrington of Boston published a piece of correspondence in the JOURNAL, on "The Surgeon of the Mayflower," sketching the life and services of Dr. Samuel Fuller, and suggesting that recognition should be given to him by the medical profession at the celebration of the Pilgrim Tercentenary.

On December 16, 1920, Dr. Charles H. Bangs, of Swampscott, Massachusetts, published in the JOURNAL a more extended article on "The Pilgrim Physician." At the meeting of the Council of the Massachusetts Medical Society in June, 1921, Dr. Bangs urged that "the Massachusetts Medical Society take steps in this tercentenary year to make a suitable memorial to that eminent pioneer physician." Accordingly Dr. Bangs, and Dr. George O. Ward of Worcester, Dr. Myles Standish of Boston, and Dr. Edgar D. Hill of Plymouth, were appointed a committee, under the chairmanship of Dr. Robert M. Green of Boston, to consider some suitable memorial to Dr. Fuller.

After several meetings during the tercentenary season, this committee reported to the Council on October 5, 1921, that it had considered several propositions, but was unanimous in recommending that the memorial should take the form of a fund, to be known as the Samuel

Fuller Memorial Fund, to be applied to the establishment of a bed or ward at the Plymouth Hospital. This report was referred to the Committee on Membership and Finance, which, on February 1, 1922, again reported to the Council, approving the project but not recommending an appropriation of money from the treasury of the Society. The Council, therefore, voted to accept the recommendations of both committees and delegated further action on the Samuel Fuller Memorial to the original committee in conference with the President of the Society.

In accordance with this action the Samuel Fuller Memorial Committee appealed last spring through the JOURNAL to the medical profession for subscriptions of not more than five dollars to the Samuel Fuller Memorial Fund. A few physicians responded promptly and generously. Their contributions were acknowledged in the JOURNAL, and a suitable certificate was sent to each subscriber. Since this time, however, interest in the Samuel Fuller Memorial Fund seems to have waned; and the committee is now moved to call attention to it again, in confident expectation of a more extensive response.

The services of Dr. Fuller as the pioneer physician of New England are unique. Not only was he the sole practitioner of medicine aboard the *Mayflower*, and in the Pilgrim community during the bitter hardship and distress of its first year at Plymouth; but later, as that community was extended by other settlements along the Massachusetts shore, he extended his ministrations as practitioner and consultant, so that his name and personality were known throughout the New England colonies of the seventeenth century. These services should not now be suffered to lapse into oblivion. And it has seemed that the best memorial perpetuation of them will be in the form of such a fund as the Massachusetts Medical Society is now endeavoring to raise, to continue in the Plymouth community the service to humanity which Dr. Fuller so freely rendered during his own life.

This fund, which is peculiarly a memorial by physicians to a physician, will be held in trust by the committee and its progress regularly reported to the Council and the Society. Its nucleus is already securely invested in a savings bank; and when it has reached sufficient size, it will be presented by the Society to the Plymouth Hospital, for the endowment of a free bed or ward in memory of Doctor Samuel Fuller, the Pilgrim Physician, the income only to be used for its maintenance. The memorial will therefore be permanent, a perpetual potentiality for good, for the relief of the same human suffering and misfortune as those which Dr. Fuller gave the labor of his life to alleviate.

In another column of this issue of the JOURNAL is published a complete list of those who have already subscribed. Further contributions will be duly acknowledged in the JOURNAL, and a suitable certificate will be sent to each subscriber.

Subscriptions should be mailed to the chairman of the committee, Dr. Robert M. Green, 496 Commonwealth Avenue, Boston.

STANDARDS OF MOTHERS' MILK IN AUSTRALIA.

The Medical Journal of Australia reports that the Commonwealth, New South Wales, Queensland and Western Australian health authorities have adopted an arbitrary standard composition of human milk at 1.5% protein, 3.5% fats and 6.5% sugar but permit a 20% variation of each constituent. The Victorian authority also accepts this arbitrary standard of composition but is not prepared to recognize any fixed variations in the percentage of sugars.

A study in 1915 of the composition of mothers' milk in Australian women showed that the fat content varied between 0.56% and 7.6%, the average being 3.14%, which is lower than the figure on which the legal standards are based. The women from whom the milk was obtained were all apparently normal and the babies were well nourished. During the first eleven days the fat content of the milk of these women rose from 2.8% to 4.1%. It was contended that nature provides a variation of 80% below the mean and 15% above.

The comment on the situation by physicians is severe for it is felt that the standards adopted are too arbitrary and not in accordance with physiological facts.

THE SPAHLINGER TREATMENT OF TUBERCULOSIS.

REPORTS from England set forth that the Red Cross Society has not advanced thirty thousand pounds as the purchase price of the Spahlinger Serum, but has appropriated funds for an investigation of the treatment under scientific observation.

Spahlinger has insufficient resources to carry on production of the Serum in suitable quantities for use in many institutions. It will be a considerable length of time before the selected institutions will be supplied with material for study.

The question has been raised as to the propriety of the action of the Red Cross in taking over the function of endowing scientific investigations. The original purpose in the organization of the Red Cross did not cover such functions, and it is quite reasonable to assume that scientific investigations could be left to other organizations with advantage to all concerned.

The obligations of the Red Cross are large enough to call for the employment of all its resources.

AUTOMOBILE FATALITIES.

THE Department of Commerce announces that 10,168 deaths resulted from automobile accidents in 1921 in the death registration area. This covers 82 per cent. of the total population. The deaths due to motorcycle accidents are not included. The figures represent a death rate from automobile accidents of 11.5 per 100,000 population. This is an increase of 1.1 over the preceding year and in comparison with former years shows a steadily increasing rate. California, with a record of 24.4 heads the list. Connecticut comes next with 15.5, then New York with 15.4 and North Carolina with 15.3 next in order. Massachusetts, Rhode Island and Illinois have about the same proportion, a little over 13 per 100,000. Mississippi is the safest state in this country to live in from the standpoint of automobile hazard to life, with the proportion of 2.6 per 100,000.

There can be no doubt of the value of the proper use of the automobile, but there is reasonable doubt of the necessity of the greater proportion of fatalities. The automobile may be a valuable addition to health in its power to provide recreation. It may be that the entertainment and open air life incident to its use actually adds to life and efficiency and offsets its bad features, but nobody knows the exact relative values at present. It is often contended that its use by physicians adds to the efficiency of medical practice and is a means of saving life. Some patient and painstaking student may be able to console us in the future. On the other hand, the increase in the great number now in use may lead to lessened employment for purposes of recreation, for we are confronted with a congestion on our roads at times that detracts from the pleasure of automobile travel.

The larger Massachusetts cities show the following figures for 1921:

Worcester, 37 deaths; 20.0 per 100,000.
Lowell, 21 deaths; 18.5 per 100,000.
Cambridge, 19 deaths; 17.2 per 100,000.
Springfield, 23 deaths; 16.9 per 100,000.
Boston, 103 deaths; 13.6 per 100,000.
Fall River, 13 deaths; 10.8 per 100,000.
New Bedford, 9 deaths; 7.2 per 100,000.

In all of these cities except New Bedford the ratio is larger than it was in 1920.

These figures present opportunity for analyses, for such questions as the proportion of high-powered cars, the physical fitness of drivers, the relation of through travel to the number of deaths and many other questions might be studied to advantage. Worcester, Lowell, Cambridge and Springfield are cities in which there is much through travel. Boston, Fall River and New Bedford could be spoken of as more largely terminal, although Boston has a very large number of visiting automobilists. Cities through which large high-powered cars pass in greater numbers may have more elements of danger. No analysis has, however, been made and we are left without explanation other than the facts setting forth the number of deaths and the proportion to inhabitants.

One can logically raise a question as to the greater blame of Worcester as compared with New Bedford.

SOME SUGGESTIONS AND CONCLUSIONS IN REVIEW OF THE SESSIONS OF THE SURGICAL CONVENTION.

Now that the shouting and the tumult has ceased, and the Captains and the Kings of Surgery have largely departed, it is permissible to review a little the physical and mental aspects of the 10th Convocation of the American College of Surgeons, and to regard some of the many considerations which it has conveyed and impressed.

First, and perhaps most of all, the meeting itself emphasized and accentuated to a remarkable degree that text which Dr. Harvey Cushing so aptly took for his presidential address—an admirable, important and interesting essay; an essay which should be reread by all who heard it, and studied attentively by those who did not.

"No one can be a good physician who has no idea of surgical operations, and a surgeon is nothing if ignorant of medicine. In a word, one must be familiar with both departments of medicine."

Look again at the very voluminous programme of the Congress and notice the wide catholicity of both topic and teacher in surgical matter during those very busy five days; one-fifth of the entire time was given to the broad subject of hospitals, in all their manifold elements; one evening to the presentation of a signal and well merited honor to "an institution," a Man—a Teacher, an Editor and a Surgeon—and great in all these roles; two dignified and colorful ceremonials marked the opening and ending of the sessions; and throughout the other four days, the Surgeon has been assisted and his work illuminated and clarified by the Anatomist, the Physiologist, the Neurologist, the Roentgenologist, the Syphilographer, the Internist and the leaders of practically every one of the great subdepartments of medicine. This admirable and broad view of what surgery denotes and connotes is both proper and very striking.

A second consideration totally different in character, and one which concerns the practical working aspects of the meeting, is this — that some of the most deserving and most carefully prepared clinics were but sparsely attended;

simply for the purposes of illustration an afternoon session of the Boston Dispensary may be cited. For old associations, as well as for the interest which its programme excited, a Boston doctor went to this clinic and was rewarded by as well arranged, as interesting and instructive an afternoon as can well be imagined; with an exposition of methods and end-results that were quite beyond criticism. Any large hospital in this country might justly be proud of the results of fractures and operations there shown, while the methods in vogue of initial examinations, of the conduct of the sub-departments and of general efficiency and economy of the entire institution, merited the attendance of many times the number of visitors present. This was the more to be emphasized since the work and the problems of the Dispensary, as of more than one other relatively small institution, is closely in line with that of a great number of hospitals throughout the country. Members of those staffs were among our visitors; in fact, it may reasonably be assumed that a majority of the visiting surgeons would have seen at the less well attended clinic in Boston, the attack upon and the solution of problems more nearly their own, than those which they tried to observe in the overcrowded amphitheatres of the largest hospitals. This is a practical question, fully appreciated by those who outline the meetings of the College, but it is a question for which as yet an entirely satisfactory solution has not been discovered.

Finally, was the meeting a success, and did Boston Surgery show itself to be fairly well to the fore as judged by the high standards which the American College of Surgeons proclaims and demands? To this, one can only say that frequent and apparently frank comments seemed to give an affirmative answer. In spite of pessimists and punsters, Boston may consider itself fairly worthy of its medical old masters. Ancestors are both an asset and an inspiration, and also a responsibility and a challenge. It is a fact that the next five years—even the next three—will witness the passing from the active surgical staffs of some of the largest Boston Hospitals, nearly a round dozen who for the past twenty or thirty years have worked in their wards and operating rooms; and for the past decade, at least, have borne the burden of the day and the heat.

Many of these men feel themselves still young in the physical and physiological sense, and they experience, at least in a slight degree, that vague though ancient and very human feeling of wonder as to what the veiled future holds in hidden hands for the institutions which they love so well, and which they have come to look upon, not unnaturally, as their very own. "In changeless change they go, the Singing Days;" and shortly the dozen surgeons who attain to the time-honored age of threescore years, commit the care and the conduct of and the reputation of their workshops and amphitheatres to the hands of the younger men, who have so recently been their pupils, and their students!

Fortunately they may be comforted! There is no need nor excuse for apprehension! All who watched the work of the younger generation of Boston surgeons during the past week—work done under the keen and scrutinizing, though friendly eyes of the visitors, the best surgeons of America—were convinced that the future of Boston's hospitals and of surgery in Boston, is secure; it rests upon young but sturdy shoulders; it will be done by youthful but well-trained hands, directed by healthy and disciplined and able brains, for it is amply evident that, good as our surgical fathers and forefathers were, our sons will be even better!

News Notes.

Change of Office—Dr. T. Chittenden Hill announces the removal of his offices from 31 Bay State Road to 270 Commonwealth Avenue.

Graduation of the First-Trained Nurse in America—On October 23, the New England Hospital celebrated the fiftieth anniversary of the graduation of Miss Linda Richards, the first graduate trained nurse in America. Dr. Alfred Worcester delivered an oration.

American College of Surgeons—Officers of the American College of Surgeons, who were elected at the annual meeting: President, Dr. Albert J. Ochsner, Chicago; First Vice President, Dr. Lincoln Davis, Boston; Second Vice President, Dr. John George McDougall, Halifax.

Worcester District Medical Society—An open meeting, to which the public were invited, was held November 8th, at 8 p.m., in Horticultural Hall, 18 Front Street. The subject for discussion was, "The Prevention of Cancer." Program: The Local Cancer Situation, Dr. Ernest L. Hunt, Worcester. Progress and Results in Cancer Control, Frederick T. Hoffman, LL.D., Director American Society for the Control of Cancer—Consulting Statistician for the Prudential Insurance Company of America. The Cancer Society's two-reel film entitled, "The Reward of Courage." Dr. Kendall Emerson, Chairman of the Worcester Committee, presided.

Note.—During National Cancer Week, November 11-18, there will be public Clinics, 11-12 a. m., every day, at the Worcester City, St. Vincent, Memorial and Hahnemann Hospitals.

Physicians desiring consultations are invited to bring or send their patients to one of these Clinics at the appointed hour. The results of

the examination will be promptly forwarded to the physician in charge of the case.

LYNN MEDICAL FRATERNITY. — A regular meeting of the Lynn Medical Fraternity was held at Hotel Seymour, Lynn, on October 31, 1922, at which Dr. William E. Preble, of Boston, presented a paper upon "Obesity,' with a series of charts based upon an analysis of 1000 cases.

AMONG THE CANDIDATES for Fellowship in the New York Academy of Medicine the name of Thomas Edward Cavanaugh, M.D., of Springfield, Mass., appears.

HAMPSHIRE DISTRICT MEDICAL SOCIETY.—A regular meeting of the Society was held at Boyden's Restaurant, Northampton, Wednesday afternoon, Nov. 1, at 4:30 P.M. Dr. Florence Gilman, College Physician and Director of Hygiene and Physical Education at Smith College, read a paper on "Health Building and Health Training as Part of the College Curriculum." Dr. Gilman is a national authority on the training of the American college girl.

DR. CHESTER T. COBB, Northampton, attended the annual convocation of the American College of Surgeons recently held in Boston.

WEEK'S DEATH RATE IN BOSTON.—During the week ending Nov. 4, 1922, the number of deaths reported was 222, against 176 last year, with a rate of 15.16. There were 30 deaths under one year of age against 20 last year. The number of cases of principal reportable diseases were: Diphtheria, 68; Scarlet Fever, 27; Measles, 71; Whooping Cough, 69; Typhoid Fever, 1; Tuberculosis, 39. Included in the above, were the following cases on non-residents: Diphtheria, 4; Scarlet Fever, 4; Whooping Cough, 1; Tuberculosis, 3. Total deaths from these diseases were: Diphtheria 4; Whooping Cough, 4; Tuberculosis, 14. Included in the above were the following cases of non-residents: Diphtheria, 2; Tuberculosis, 2.

CHANGE OF OFFICE.—Dr. George Gilbert Smith announces the removal of his office to 7 Marlborough Street, Boston, Massachusetts. Telephone Back Bay 10507.

HARVARD MEDICAL SOCIETY—A meeting of this Society was held in the Peter Bent Brigham Hospital Amphitheatre Tuesday evening November 7th.

PROGRAM.

Demonstration of Cases.

Wirsung to Riolan on the Pancreatic Duct. Dr. John Donley, Providence.

The Inadequacy of the Measured Diet as an Index of the Food Metabolized. Dr. Henry B. Richardson, New York.

THE FIRST CLINICAL MEETING of the General Staff of the Sturdy Memorial Hospital of Attleboro, was held at the hospital on Thursday, November 2nd, at 4 p.m. Program: SURGICAL, Reports of Two Cases of Uterine Fibroids Simulating Pregnancy. Dr. F. J. Carley of North Attleboro. Discussion opened by Drs. John A. Reese and Wm. O. Hewitt. MEDICAL, Report of a Case of Hodgkin's Disease and Report of a Case of Leukæmia. Dr. H. L. Rich of Attleboro. Discussion opened by Drs. F. V. Murphy and A. B. Shoemaker. A buffet lunch was served at the close of the meeting.

DR. WM. O. HEWITT,
DR. JOHN A. REESE,
DR. WILFRED E. ROUNSEVILLE.
Committee in Charge.

THE RED CROSS ROLL CALL.

Membership in the Red Cross is both a privilege and a patriotic duty of American citizenship. Congress created it as the national and international agency of the United States to meet all great emergencies. The demands upon it locally, nationally, and internationally are persistent and insistent by suffering peoples at home and abroad.

The Red Cross is an army. Its members constitute this noble army fighting the battle of humanity. It is the army whose badge is service to all mankind; to humanity everywhere of whatever religion, race, color, or creed.

The emergency is here. It is now facing the Red Cross at home and abroad. Our own ex-service men and disasters at home are constantly with us. And now, the American Red Cross has responded to the appeal of the President of the United States and has definitely undertaken the work of saving the Christian and other refugees who have been driven by the Turks from Asia Minor into Greece.

The obligation met by the American Red Cross when in war time it furnished 19,877 nurses for active duty with the Army and Navy, the report just issued shows, is being met also in peace time with a reserve of nurses now aggregating 38,855, an increase of 1,068 since the 1921 report. Of this reserve 102 are serving the Army, 117 the Navy, 162 the U. S. Public Health Service, and 1,035 the U. S. Veterans' Bureau. One hundred and one nurses died during the year, three from disability incurred by service in the World War.

The Red Cross public health nurses are working in 1,145 communities in the United States, Alaska, the Philippines, Porto Rico, Hawaii and the Virgin Islands.

The Roll Call will be conducted from November 11 to November 30.

WINCHESTER'S INFANT MORTALITY.

The distinction of having the lowest infant mortality for 1921 in Massachusetts is enjoyed by Winchester. The rate is 38 per 1000, which is half the average state rate.

Maurice Dinneen, Winchester's Health Officer, has stated that this remarkable showing should be credited to the Board of Health, and is the result of many years' careful oversight of health conditions. This board has maintained a health center with a clinic under the supervision of Dr. Harold F. Simon. Instruction in pre- and post-natal work has been given by a full-time nurse. Under Carl F. Woods, Chairman of the Board of Health, the milk supply of the town has been carefully supervised.

The State Department of Health could properly give a medal to any municipality that could demonstrate such efficiency.

MASSACHUSETTS CENTRAL HEALTH COUNCIL.

A regular meeting of the Massachusetts Central Health Council was held at Hotel Victoria Nov. 1st.

The following organizations were represented:

American Red Cross by Mr. Roach.

American Society for Control of Cancer, Dr. Richardson.

Massachusetts Association Boards of Health, Mr. Kirschbaum.

Massachusetts Association of Directors of Public Health Nursing, Mrs. Stevens.

Massachusetts Department of Public Health, Drs. Kelley and Champion.

Massachusetts Dental Society, Drs. Rice and Lindstrom.

Massachusetts Medical Society, Drs. Safford and Bigelow.

Massachusetts Society for Social Hygiene, Mr. Hess.

Massachusetts Tuberculosis League, Dr. Otis and Mr. Spencer.

Dr. Champion reported progress in the maternity work of the State Department. Three physicians and seven nurses are studying conditions throughout the state. Reliable statistics of maternal mortality in childbirth are sought.

Dr. Richardson outlined the plans for Cancer Week, November 12th to 18th. District and local medical societies and hospitals will cooperate to bring about more effective control of this disease.

Mr. Walter Clark, representing the National Health Council, present by request, described the work of Health Councils in other states and outlined plans for extending the Massachusetts form of council throughout the country.

Emphasis was laid in the discussion that followed, regarding the primary function of the Massachusetts Council, which is the meeting of representatives of the ten allied organizations for conference, discussion and reports on the work and plans of each member organization.

Publication of a popular journal through whose pages all health organizations in Massachusetts might reach a large constituency, was discussed.

Gertrude W. Peabody, *Sec.*,
13 Kirkland St., Cambridge.

GRADUATING EXERCISES OF THE CAMBRIDGE HOSPITAL TRAINING SCHOOL FOR NURSES.

On October 31st fifteen pupils completed the courses in the Cambridge Hospital Training School and were given diplomas.

The meeting was presided over by the President of the Board of Trustees, Dr. William D. Swan. Dr. W. P. Bowers spoke on Some of the Problems Relating to the Education of Nurses.

Miss Josephine Thurlow, superintendent of the hospital, reviewed the history of the school and reported that there are now in training seventy-eight pupils. The curriculum has been extended so as to give courses in some departments of public health nursing and the administration of anaesthetics. A large audience convened to extend congratulations to the graduates.

Obituary.

KARL VON RUCK, M.D.

Dr. Karl von Ruck, internationally known authority and specialist on treatment and prevention of tuberculosis, died in Asheville, N. C., Nov. 5, 1922, after an illness of several weeks, at the age of 73.

Born in Stuttgart, Germany, in 1849, he received his degree of doctor of medicine at the University of Tübingen in 1878. He went to England and later came to America and earned a degree of M.D. at the University of Michigan in 1879. He later studied at the University of Berlin in 1882. After some years of practice in Ohio, he settled in Asheville, where he founded the Winyah Sanatorium in 1888. This was among the first private institutions for tuberculosis treatment. In 1895 he founded the Von Ruck Research Laboratory for Tuberculosis at Asheville. He was a member of the American Medical Association, and numerous medical congresses and societies in America and in Europe, and he contributed articles on tuberculosis to medical journals in this country and in Europe. In 1872 he married Delia Moore of Ottawa, who survives him.

Correspondence.

NEURO-PSYCHIATRY.

November 1, 1922.

Mr. Editor:

This Bureau is charged with the responsibility of furnishing medical care and treatment to veterans of the World War. We find ourselves handicapped by a very serious shortage of physicians and nurses trained in Neuro-Psychiatric work. The need has become so urgent that the Director has decided to make an endeavor to give special instruction to selected doctors and nurses for the purpose of supplying our needs in hospitals and dispensaries.

I am enclosing an announcement on the subject which is self-explanatory.

Dr. Frank F. Hutchins, Professor of Mental and Nervous Diseases, University of Indiana, and the Director of Clinical Neuro-Psychiatry, U. S. Veterans' Bureau, is in direct charge of these courses and any reply that you care to send should be forwarded to this office for his attention.

It has occurred to me that you might assist the Bureau to bring this matter to the notice of your readers, by publishing such extracts or portions of the announcement as you may deem necessary and convenient. Very sincerely yours,

ROBERT U. PATTERSON, A.J.M.,
Assistant Director.

October 31, 1922.

The United States Veterans' Bureau offers a special course in Neuro-Psychiatry to a certain number of qualified physicians on condition that upon completion of such course they will continue in the service of the Bureau for a period of at least two years thereafter.

The policy of this Bureau is to provide expert medical attention for the disabled veterans so that everything possible may be done to restore them to health and proper status in civilian life. To maintain this policy in the opening up of new hospitals, and being unable to secure the required number of specialists in nervous and mental diseases, it becomes necessary to instruct a staff of our own for this line of work. To this end a systematic and comprehensive course in Neuro-Psychiatry has been carefully outlined consisting of 176 lectures and demonstrations and some 440 hours of clinical and laboratory work. Each course will be for a period of about four months. There will probably not be more than two courses annually. Courses will be offered as long as it appears necessary in order to meet Bureau requirements. Instruction will include the necessary reviews of the fundamentals, followed by clinics and lectures on the various forms of nervous and mental diseases, including endocrinology. Special attention will be devoted to diagnostic methods, the general care of patients, and methods of treatment. Students will have actual experience in practical work. General problems of hospital administration, medico-legal questions, rehabilitation methods, psycho-metric examinations and other related matters will be adequately dealt with.

The main part of this course will be given at St. Elizabeth's Hospital, a government institution for the insane at Washington, D. C., which offers unusual and unexcelled facilities for such work. There are nearly 4,000 patients and case histories of more than 20,000 discharged patients immediately available for study. Here are all classes of nervous and psychotic diseases, while other public hospitals in Washington will provide abundant clinics in so-called functional diseases, borderline cases, and the milder types.

The teaching staff that has been selected to give this course in Neuro-Psychiatry is significant. Besides the members of the staff at St. Elizabeth's there will be lecturers from the Medical Departments of the Army, the Navy, the Public Health Service, the United States Veterans' Bureau and the U. S. Department of Agriculture. A number of America's most eminent neurologists and psychiatrists will come to deliver lectures on special topics.

As the number of students that can be accommodated is limited, early application for each course is desirable.

Further information may be secured by applying to the Bureau.

Other things being equal, members for the course will be selected in the order of their application.

Students who are authorized to take the course who are not already in the employ of the Veterans' Bureau will receive a salary of $166.00 per month, with no allowances, while taking the course.

On satisfactory completion of the course members will be recommended for the grade of Passed Assistant Surgeon in the Reserve Corps of the U. S. Public Health Service, or they will become eligible for employment as Class "B" physicians under the U. S. Civil Service Commission and assignment to duty with the U. S. Veterans' Bureau. These salaries range from $3,000 per year, upward.

The course will start on January 4, 1923.

Approved: T. H. SCOTT, *Acting Director.*

THE USE OF INSULIN.

Boston, Nov. 3, 1922.

Mr. Editor:

I have been asked by many physicians and innumerable patients, during the past few months, as to the use of insulin in cases of diabetes, and I would be very glad if you would publish this letter.

As I understand it, the only place where insulin is, or can be, of use is in those cases of diabetes (so called) that are dependent on an organic pancreatic condition causing a partial loss of function of the islands of Langerhans. This form of diabetes (so called) that are dependent on an organic pancreatic infection usually entering the body through the tonsils.*

In these cases we have a distinct destructive pathological process going on in the pancreas, and we use the symptoms of blood sugar, urine sugar, and patient's loss of weight as our indicator as to how the process is going on in the pancreas, whether it is progressing or is standing still. Now, adding to the food something which will change these symptoms without affecting the destructive process in any degree, it seems to me, is something akin to treating a patient with typhoid fever by keeping him in a bath sufficiently cool to cause him to have a normal temperature. You *may* have slightly increased the comfort of the patient and his friends who anxiously enquire daily as to what his temperature is, but you *have* obliterated your principal indicator as to how the process in the intestine and the poisoning of the system is going, and consequently have destroyed one of your best indicators for treatment. But have you done anything to alter or help in the slightest degree the process which is going on in the intestine?

Of course, where the destructive process in the pancreas has progressed so far (or is steadily progressive) that the patient cannot take care of the minimum necessary amount of carbohydrate to carry on life without causing a high blood sugar and sugar in the urine, then, under these circumstances, insulin or some similar material will give comfort to the patient by allowing his system to utilize more carbohydrate than it could otherwise, and, under these

*Diabetes (pancreatic) caused by infection of the tonsils. Stephen H. Blodgett, M.D. Penn. Med. Jour., March, 1921.

circumstances, its use would be justified just as is the use of morphine in the last stages of painful cancer or in the last stages of subacute glomerular nephritis.

Of course in the cases of diabetes (so called) due to a functional disturbance in the liver (the hepatic form of diabetes), which constitute the majority of the cases of so-called diabetes, a pancreatic extract or enzyme would be of extremely limited (if, indeed, any) use.

It seems to me that the story of insulin is to be analogous to that of pepsin. A great many years ago, when pepsin was first exploited, every person who thought he had any digestive disturbance took it and almost every physician ordered it for any of his patients who had any stomach symptoms.

Now in a case presenting stomach symptoms, the physician tries to find the cause and, if possible, remedy it, instead of indiscriminately giving pepsin, which, after years of use, it was learned did nothing to cure the pathological or organic condition causing the stomach symptoms in any of the cases, and only palliated the symptoms in a few cases.

STEPHEN H. BLODGETT, M.D.

PASTEUR CELEBRATION OF THE NEW YORK ACADEMY OF MEDICINE.

November 2, 1922.

Mr. Editor:

The speakers who are expected at the Pasteur Celebration of the New York Academy of Medicine are: Prof. Russell H. Chittenden, Dr. William H. Welch, Dr. Erwin Smith, Dr. Simon Flexner, Dr. Herman Biggs, and Dr. W. W. Keen.

The exhibition of books, photographs, medallions, manuscripts, etc., referring to the life work of Pasteur, is to be open to the public at the New York Academy of Medicine, 17 West 43rd Street, New York, for two weeks, commencing Dec. 27, 1922.

The public addresses are to be given at the Academy on the evening of Jan. 10, 1923.

Anyone having souvenirs or memorabilia connected with Pasteur's work is invited to loan them for the Academy exhibition, and address, for this purpose, the librarian of the Academy, Mr. J. S. Brownne.

Very truly yours,

W. GILMAN THOMPSON.

142 East 62nd St., New York City.

[NOTE.—Louis Pasteur was born December 27, 1822. He died September 28, 1895.]

LO, THE POOR NURSE!

Jamaica Plain, 17 Parley Vale.

Mr. Editor:

As a graduate nurse, who for some years has adopted the rôle of professional invalid, it has fallen to me to know a good many nurses and not a few medical men, and out of my knowledge thus gained, it would be a gratification to be permitted, with the profound humility felt toward the doctor by all self-respecting nurses, to ask Dr. Morse if he is quite sure that his attitude toward the nurse is justified.

For the social worker, I hold no brief, having met but two in their professional capacity. Two were a "genteel sufficiency."

The nursing contingent is largely composed of two elements—the "Mollys and Maggies" from whom one of our leading doctors recently advised us to recruit our ranks, during the acute shortage of nurses, and the women who have had better social and educational advantages.

The former class stand in too much awe of any professional class, and though they often develop into the most skillful nurses, they are too timid to ask professional advice.

The others, some of them college graduates, or coming themselves from professional homes, are too keenly aware of the demands already made on the time of a busy doctor and hesitate to enlarge his burden by the asking of questions which they feel may seem puerile and unnecessary.

Many of us, in my own day, twenty-five years ago, eagerly absorbed every word and gesture of the clinician, as we stood at salute during "the visit" and, if we could, used a stethoscope afterwards to further enhance that knowledge which we were told we must not betray, but which might be useful if we found ourselves with a sick patient a hundred miles from a doctor. I feel pretty sure it is the same in these days, and that there are few nurses who would not eagerly grasp any information, either on the medical or nursing side, if offered by the doctor. As a rule the doctor is too apt to look upon the nurse as a person of inferior grade, who works *for* him rather than *with* him. He utterly fails to understand our appreciation of him, and that some of us who might be capable might have taken his own degree, except that we shudder at shouldering the responsibility which is his—which we do not want. This is in no sense a complaint against the doctor. No class of men are braver, more high-minded, more generous, or more genuinely helpful to the community or to the individual, but I beg for a closer unity; a better understanding if, working for a common cause, we could more truly work *with* each other.

In conclusion, may I respectfully remind Dr. Morse that a nurse before she becomes a nurse, is a woman and that every woman is born with the knowledge that the easiest way to win man's esteem, is to ask his advice; he may thus evaluate more clearly the poise and self-control attained by the woman who takes a nurse's training.

I am morally certain that Eve's first act on realizing Adam, was to ask him if he "thought the earth, like the moon, was made of green cheese," whereupon, Adam with no previous thought as to the texture of the earth, reversed his indignation over her impudent arrival and looking down upon "the woman whom God had sent him" said, "You dear little thing."

MARY J. BIDDLE, R. N.

JOINT MEETING OF BARNSTABLE, BRISTOL NORTH, BRISTOL SOUTH AND PLYMOUTH DISTRICT SOCIETIES.

Mr. Editor:

There was a meeting of Barnstable, Bristol North, Bristol South and Plymouth District Societies at the Lakeville State Sanatorium on Thursday, November 9th. About one hundred and twenty physicians were present. An excellent dinner was served at 1 P.M. Following the dinner there was a meeting, with Dr. Sumner Coolidge, president Bristol North Society, in the chair. Dr. John W. Bartol, president of the Massachusetts Medical Society, was the first speaker. He spoke briefly on some of the aims of the state society and asked for an opinion of those present on the action of having the next council meeting of the state society at Pittsfield. The sentiment was in favor of this, Plymouth District dissenting. The next speaker was George Chandler Whipple, Professor of Sanitary Engineering, Harvard University, on Mosquito Control in Massachusetts through the better dissemination of knowledge among the people, organized study of the habits of the insect, and the organization of the communities for its eradication.

Dr. Eugene R. Kelley, Commissioner of Public Health, next expressed his regrets that Dr. Richard P. Strong was, at the last minute, unable to be present, and asked the support of everybody for the Gorgas Memorial Institute. He then touched on the necessity of the recognition by the general practitioner of early tuberculosis in children, the education of the public on the curability of early cancer and

the better understanding between the general practitioner and the Public Health Department.

Dr. Benjamin White, Director Division of Biological Laboratories, demonstrated the Schick test for diphtheria. This concluded the programme.

This meeting was better attended than that of the previous year, and it was clearly demonstrated that the joint meetings are successful and should have a definite place in the Society.

Yours truly,

JOSEPH L. MURPHY.

Miscellany.

BRIDGEPORT'S HEALTH.

Under this title this Connecticut city resumes a monthly health report.

The work is organized under the following nine divisions and directors:

Administration, Miss Bessie O'Hara; Child Hygiene, C. C. Taylor, M.D.; Communicable Diseases, R. D. Fear, M.D.; Laboratories, Harriet Bixby, B.S.; Vital Statistics, Miss Cora Freyler; Sanitation, C. Howard Dunbar; Food and Milk Inspection, Harry Bartram; Waste Disposal, Health Officer; Assistant Health Officer, E. A. McLellan, M.D.

Dr. William Hall Coon is the Health Officer. He also acts as Registrar of Vital Statistics, acting under the Hon. Fred Alwater, Mayor (Ex-officio member), William L. Zipp, President, J. H. Callahan, D.D.S., Frank W. Stivers, M.D., and Antonio S. Renzi, Commissioners.

Six health stations have been organized and there are nine culture stations designed as substations for laboratories. A hospital of 100 beds has been built for the care of patients, ill with communicable diseases; there is also a tuberculosis hospital. In addition to the nurses engaged in communicable disease work there are twenty nurses, to each of whom has been given a district of the city in which to work.

The report indicates that the Health Department is active and well organized.

NEW AND NON-OFFICIAL REMEDIES.

Lederle Antitoxin Laboratories: Diphtheria Toxin-Antitoxin (0.1L+).

H. A. Metz Laboratories, Inc.: Alumnol.

H. K. Mulford Company: Hay Fever Timothy Pollen Extract—Mulford.

Parke, Davis and Company: Normal Horse Serum—P. D. & Co. Rabies Vaccine (Cumming)—P. D. & Co.

E. R. Squibb and Sons: Acne Vaccine. Colon Vaccine—Squibb. Gonococcus Vaccine. Meningococcus Vaccine. Normal Horse Serum. Pertussis Vaccine, Curative. Pertussis Vaccine, Immunizing. Purified Diphtheria Antitoxin (Antidiphtheritic Globulin). Pneumococcus Vaccine. Staphylococcus Vaccine. Staphylo-Acne Vaccine. Streptococcus Vaccine. Tetanus Antitoxin, Purified. Typhoid Vaccine. Typhoid Vaccine Combined, Immunizing.

RED CROSS NURSES FOR MAINE AND ALASKA.

The will of the late Jane A. Delano, who died in France while serving as director of the American Red Cross Nursing Service, provided for missionary nursing service.

Under this provision Mrs. Bertha R. Steeves has been selected for the Alaskan field and Miss Stella Fuller will assume similar work in the islands off the Maine coast.

These nurses will be under the supervision of the American Red Cross. *The American Journal of Public Health* has published the conditions of the bequest under which this service is to be maintained as follows:

Miss Delano's purpose in endowing this special service as a memorial to her father and mother was to create nursing facilities in isolated districts where no funds are available from governmental or other agencies or from individuals.

THE DANGER OF ASSOCIATION OF CHILDREN AND TUBERCULOUS SERVANTS.

THE New York Tuberculosis Association has made a forceful plea for care in the employment of those servants that are in close association with children.

The assertion is made that most domestic servants belong to the class which is particularly susceptible to tuberculosis because they are in the age when tuberculosis is most frequent and their indoor life and faulty habits predispose to the disease.

Again, these servants live in close contact with members of the family, handle the food and perform many kinds of personal service, especially to children. Affectionate children easily fall into the habit of kissing.

According to the last Federal census 156,667 persons were engaged in domestic service in New York City. At least one per cent., or 1560, were afflicted with tuberculosis. Several striking instances are given in the bulletin of the New York Tuberculosis Association as follows:

A young, robust Irish girl of 19 years, weighing 180 pounds, was employed as a waitress in a family with two children. She had a slight but persistent cough and tubercle bacilli were found in her sputum. One child developed a tuberculous hip and the other died of tuberculous meningitis.

The mother of one of my patients asked me to examine her houseworker for a cold which she had had for a "few weeks." The girl had extensive lesions in both lungs, a temperature of

102, and died in Bellevue Hospital of tuberculosis not two weeks later. The only child in the family ran an irregular fever for some weeks during several periods in the next two years. This was undoubtedly due to activity of a tuberculous infection.

A wet nurse was referred to me for examination before going to a new baby. She had been nursing a doctor's child who had just died and had been sent to the doctor by an eminent obstetrician. She had a massive infiltration of the entire right upper lobe with a small cavity. Her lungs had never been examined.

A nurse girl of a child ten months old who was running a prolonged irregular fever and who had a positive Pirquet, was found to have an active lesion at one apex. The child died a few months later. This nurse went to her own physician, who disagreed with the diagnosis and later was seen on the street taking care of another child. She refused to change her occupation, because she preferred the opinion of her own doctor.

Three infants who were in one nursery in a maternity hospital at the same time developed tuberculosis of the middle ear and mastoid at about six months. They had all been cared for by one nurse. By the time the infection was discovered she had left training and had gone West and so could not be examined. It was impossible to avoid suspecting her of being the source.

Three children in one family were found to be infected with tuberculosis. The source was not discoverable. In that household, however, three servants have since been found with pulmonary lesions on examination at the time of employment.

The remedy consists in requiring a certificate of health of all persons who care for children, and, indeed, for all domestic servants, for tuberculosis is not the only dangerous transmissible disease.

We guard against defective plumbing, drug addiction and other disease by a system of licensing. The requirement of a health certificate would add another step in the program to bring about diminishing tuberculosis.

OPEN MEETING FOR DOCTORS

MEDICAL ADVISORY COMMITTEE, INDUSTRIAL ACCIDENT BOARD.

November 22d at 4 p. m. in the large hearing room of the Industrial Accident Board, is to be held an open meeting for suggestions and expression of opinion in regard to the workings of the industrial act as affecting the profession.

All physicians who are interested are invited to attend and participate.

Certain insurance representatives are expected to participate.

F. J. COTTON, *Chairman.*
S. H. CALDERWOOD, *Secretary.*

PROGRAM OF MEETINGS OF MIDDLESEX EAST DISTRICT, 1922-1923.

Nov. 22, 1922. The relation of the Specialist to the General Practitioner. Papers by Dr. Brewster for the Specialist and Dr. Phippen for the General Practitioner. Discussion by Drs. Whittemore, Martin and Robbins.

Jan. 24, 1923. The Nursing Problem. Speaker to be announced later.

March 21, 1923. Mental Factors in Childhood. Paper by Dr. William Healy.

Apr. 18, 1923. Interpretation of Laboratory Findings. Papers by Dr. E. G. Crabtree and one to be announced later.

May 9, 1923. Annual Meeting.

All meetings except the annual meeting will be held at the Harvard Club in Boston.

A. E. SMALL, *Secretary.*

COMBINED MEETING OF MIDDLESEX SOUTH, NORFOLK AND NORFOLK SOUTH DISTRICT MEDICAL SOCIETIES.

In accordance with a request from the president of the Massachusetts Medical Society, a joint meeting of these three district societies will be held at Tufts College Medical School, Tuesday evening, November 21, 1922, at 8 P.M. sharp. The purpose of this meeting is to consider impending legislation relating directly or indirectly to the medical profession, to meet with the president of the Massachusetts Medical Society, and to become better acquainted with each other. Dr. John W. Bartol, president of the Massachusetts Medical Society, will talk on legislative programmes of the society.

The subject of the meeting will be "Legislative Talks of Interest to the Medical Profession," and the speakers, after Dr. Bartol, will include, Dr. James S. Stone, member of the committee on state and national legislation; Mr. Thomas C. O'Brien, district attorney of Suffolk county; and Mr. Benjamin Loring Young, speaker of the house. The meeting will be open to consider suggestions along legislative lines. This meeting will be of great interest to all, and should be supported by your attendance. A collation, no charge, will be served after the meeting.

ANIMAL EXPERIMENTATION.

WHAT ANIMAL EXPERIMENTATION HAS DONE FOR SCIENTIFIC MEDICINE.

WHAT SCIENTIFIC MEDICINE HAS DONE FOR ANIMALS.

These topics will be discussed at a public meeting of the Suffolk District of the Massachusetts Medical Society in Ford Hall, Ashburton Place, Boston, on Sunday, November 19, at 4 P.M. Dr. Charles W. Eliot, President Emeritus of Harvard University, will preside. The public are cordially invited. No tickets will be required.

SPEAKERS:

Dr. Walter B. Cannon, Professor of Physiology, Harvard Medical School. "The Value of Animal Experimentation to the Physician in His Daily Work."

Dr. Edwin H. Place, Physician-in-Chief, South Department, Boston City Hospital. "The Aspect of Antitoxins in Relation to Animal Experimentation."

Dr. Richard P. Strong, Director of the School of Tropical Medicine, Harvard University. "What Animal Experimentation Has Done for Exotic and Tropical Medicine."

Professor George H. Parker, Director of the Zoölogical Laboratory, Harvard University. "The Benefit to Animals of Medical Experimentation."

Dr. Lester H. Howard, Director of the Division of Animal Industry. "How Animal Experimentation

Has Assisted in the Control of Contagious Diseases Among Animals."

Dr. Arthur W. Gilbert, Commissioner of Agriculture of Massachusetts. "What Scientific Medicine Has Done for Farm Animals."

NOTICES.

The meeting of the Suffolk District scheduled for Nov. 22, 1922, is most important. See editorial in the issue of Nov. 9 for details.

THE BOSTON ASSOCIATION OF CARDIAC CLINICS announces an open meeting at the Massachusetts General Hospital, November 16, at 8.15 P. M. Subject: "Syphilis of the Heart and Aorta." Papers will be read by Dr. Walter Anderton of the Presbyterian Hospital, New York City, and Dr. William D. Reid of the Boston City Hospital. Discussion will be opened by Dr. William David Smith of the Massachusetts General Hospital.

BOSTON MEDICAL HISTORY CLUB.—Meeting at the Boston Medical Library, Friday, November 17, at 8 P. M., in commemoration of the third centenary of the birth of Molière (1622). Dr. Joseph W. Courtney will read on "Molière and The Faculty." It is suggested that remarks and contributions from other members be, so far as possible, confined to this subject.

JOHN W. CUMMIN, *Secretary.*

MASSACHUSETTS SOCIETY OF EXAMINING PHYSICIANS.—Meeting and dinner at Copley-Plaza Hotel, Monday, November 27, 6:30 P. M. Symposium on "Back Disabilities." "The Diagnosis of Back Disabilities," Dr. J. W. Sever; lantern slides. "Postural Defects," Dr. Lloyd T. Brown; lantern slides. "Backache in Women with Reference to Industrial Conditions," Dr. Stephen Rushmore. "The X-Ray Standpoint," Dr. A. W. George. Discussion opened by Dr. Francis D. Donoghue.

WM. PEARCE COUES, M.D., *Pres.*
HILBERT F. DAY, M.D., *Sec'y.*

ESSEX SOUTH DISTRICT MEDICAL SOCIETY meets Wednesday, December 13th, at Beverly Hospital, Beverly, 6 P.M. Speakers: Dr. W. P. Bowers, Managing Editor *Boston Medical and Surgical Journal;* Dr. John D. Adams, Boston; Dr. P. P. Johnson, Beverly.

R. E. STONE, *Secty.*

BEVERLY HOSPITAL.—A cancer clinic will be held at the Beverly Hospital, Thursday, November 16, at 4 P.M., in observation of cancer week. Doctors and nurses invited.

R. E. STONE, *Sec. of Staff.*

MEMORIAL FUND.

TO THE HONOR OF DR. SAMUEL FULLER.

1. George Washington Gay.....$5.
2. Charles Montraville Green.....$5.
3. Robert Montraville Green.....$5.
4. John Woodbury Stimpson.....$5.
5. Joseph Payson Clark.....$5.
6. Francis Dennis Donoghue.....$5.
7. William H. Blanchard.....$5.
8. William E. Curtin.....$5.
9. Walter Prentice Bowers.....$5.

CORRECTION.

Among the News Notes in the *Journal* on page 647, vol. 187, No. 18, the former position held by Dr. Benjamin Spector was incorrectly stated. Dr. Spector's former affiliation was with the New York University and Bellevue Hospital Medical College.

DISEASES REPORTED TO MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH.

WEEK ENDING OCTOBER 28, 1922.

Disease.	*No. of Cases.*	*Disease.*	*No. of Cases.*
Anterior poliomyelitis	4	Ophthalmia neonatorum	8
Chicken-pox	60	Pneumonia, lobar	67
Diphtheria	237	Scarlet fever	129
Dog-bite requiring anti-rabic treatment	2	Septic sore throat	1
Encephalitis lethargica	2	Syphilis	27
Epidemic cerebro-spinal meningitis	3	Suppurative conjunctivitis	3
German measles	5	Trachoma	1
Gonorrhea	80	Trichinosis	3
Influenza	14	Tuberculosis, pulmonary	112
Malaria	1	Tuberculosis, other forms	19
Measles	218	Typhoid fever	14
Mumps	47	Whooping cough	143
		Hookworm	1

SOCIETY MEETINGS.

DISTRICT SOCIETIES.

A list of society meetings is herewith published. This list will be changed on information furnished by the secretaries of the societies, and will appear in each issue.

Barnstable District:—Hyannis,—February 2, 1923, (Annual Meeting)—May 4, 1923.

Bristol South District:—Fall River,—May 3, 1923.

Essex North District:—Haverhill, (Semi-Annual Meeting)—Jan. 3, 1923. Y. M. C. A. Building, Lawrence, (Annual Meeting)—May 2, 1923.

Suffolk District:—Combined meeting of Boston Medical Library and Suffolk District, November 22, 1922; December 27, 1922; January 31, 1923; February 28, 1923; March 28, 1923; Annual Meeting, April 25, 1923.

The Springfield Academy of Medicine meets the second Tuesday of each month. Schedule of speakers includes the following names: Dr. Alexis Carrel, Dr. W. B. Long, Dr. J. W Williams, Dr. W. S. Thayer, and Dr. Barton Cooke, Hist. The date for each speaker has not been assigned.

Middlesex North District:—Meetings; Wednesday, January 31, 1923.

Worcester District meetings in Worcester, Dec. 13, 1922, Jan. 10, Feb. 14, March 14, April 11 and May 9, 1923, the last named date being the annual meeting.

The New England Ophthalmological Society meets at the Massachusetts Charitable Eye and Ear Infirmary, 233 Charles Street, Boston, Tuesday, November 21, at 8 P. M. Hospital Cases and Case Reports. Paper: "Tumors of the Optic Chiasm." Dr. Harvey Cushing, Dr. Paul Martin.

STATE, INTERSTATE AND NATIONAL SOCIETIES.

December, 1922. New England Dermatological Society Meeting, Wednesday, December 13, 1922, at 3.30 P. M., in the Surgical Amphitheatre, Boston City Hospital, C. Guy Lane, Secretary.

December 26-30, 1922. American Association for Advancement of Science meets in Boston.

January, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided), Hilbert F. Day, Secretary. Massachusetts Association of Boards of Health, January 25, Annual Meeting, Boston, W. H. Allen, Mansfield, Mass., Secretary.

February, 1923. New England Dermatological Society Meeting, February 14, 1923, at 3.30 P. M., in the Skin Out-Patient Department, Massachusetts General Hospital, C. Guy Lane, Secretary.

March, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided), Hilbert F. Day, Secretary.

April, 1923. New England Dermatological Society Meeting, April 11, 1923, at 3.30 P. M., in the Surgical Amphitheatre, Boston City Hospital, C. Guy Lane, Secretary. Massachusetts Association of Boards of Health, April 26, 1923, Boston, W. H. Allen, Mansfield, Mass., Secretary.

May, 1923. Massachusetts Society of Examining Physicians, (Date and place undecided). American Pediatric Society Meeting, May 31, June 1 and 2, 1923, at French Lick Springs Hotel, French Lick, Ind., H. C. Carpenter, Secretary.

June, 1923. American Medical Association, San Francisco, June 25-29, 1923, Alexander R. Craig,* Chicago, Ill., Secretary.

July, 1923. Massachusetts Association of Boards of Health, July 26, Nantasket, W. H. Allen, Mansfield, Mass., Secretary.

***Deceased Sept. 2, 1922.**